



Government of Bengal

Public Health Department

Bengal Public Health Report

By

Dr. R. B. Khambata, D.P.H.

Director of Public Health, Bengal

Reports of the Bengal Sanitary Board

and the

Chief Engineer, Public Health Department

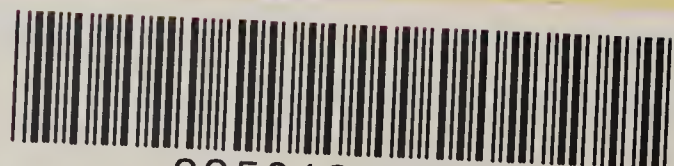
For the Year 1931

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Bengal Public Health Department.

Part I

Sixty-Fourth Annual Report of the Director of Public Health, Bengal, 1931.

Chapter I.

A.—METEOROLOGY.

The following brief account of the rainfall over Bengal during the period May to October 1931 has been furnished by the Meteorologist:—

The total rainfall of May was in large excess in the Dacca and Chittagong Divisions and in slight excess in the Rajshahi and Presidency Divisions but slight defect in the Burdwan Division. In June it was in moderate defect in all Divisions, while in the next month it was in slight excess in those places. In August the total rainfall was normal in the Burdwan Division, in slight defect in the Presidency and Dacca Divisions and in moderate defect in the remaining two divisions. In September, while normal elsewhere, it was in slight to moderate excess in the Dacca and Rajshahi Divisions. In October it was in moderate excess in the Presidency, Burdwan and Dacca Divisions, in moderate defect in the Rajshahi Division and normal in the Chittagong Division. Taking the monsoon season, May to October, as a whole, the rainfall was normal everywhere. The following table shows the departure of actual rainfall expressed as a percentage of the normal:—

Departure expressed as a percentage of normal rainfall.

Divisions.	May.	June.	July.	August.	Sep- tember.	October.	Monsoon season, 1931.
Presidency ..	+15	−29	+21	−11	−2	+33	+1
Burdwan ..	−11	−48	+18	−6	−8	+45	−5
Rajshahi ..	+11	−33	+25	−21	+27	−32	−2
Dacca ..	+60	−38	+20	−17	+18	+42	+6
Chittagong ..	+72	−40	+26	−36	−4	+4	−3

B.—AGRICULTURAL AND ECONOMIC CONDITIONS.

2. The harvest of winter rice was generally good but there was a fall in price due to world-wide trade depression. Although the harvest of jute was only about half that of the preceding year, prices generally ruled lower owing to lack of demand for manufactured goods.

The general condition of the agricultural population continued to be unsatisfactory. Heavy fall in the price of food-grains and jute and the consequent money scarcity adversely affected their condition. Distress prevailed in parts of Nadia, Murshidabad, Dinajpur, Rangpur, Bogra, Pabna and Mymensingh. Wages of agricultural labourers continued to be lower than the previous year, but the corresponding fall in the price of food-stuffs compensated them to some extent.

Chapter II.

VITAL STATISTICS.

3. **Population.**—According to the census of 1931 the population of the Bengal Presidency, excluding the Bengal States and the Chittagong Hill Tracts, is 49,901,080, which is 3,378,787 in excess of the population enumerated in the preceding census of 1921. The natural increase of the population during the decade was, therefore, approximately 337,878 per annum. The increase was shared by all divisions as may be seen from the table below:—

Divisions.				Population in 1931.	Percentage of variation.
Burdwan	...	..	..	8,647,189	+ 7·4
Presidency	..	..	..	10,108,229	+ 7·0
Rajshahi	..	..	..	10,668,066	+ 2·7
Dacca	..	..	..	13,864,104	+ 8·2
Chittagong	..	..	..	6,613,492	+13·4

The largest increase was recorded in the Chittagong Division (excluding the Hill Tracts) and the smallest in the Rajshahi Division. Six districts, showing the largest percentage increase of population during the decade, are Noakhali (+15·9), Tippera (+13·3), Darjeeling (+13·0), Bakarganj (+12·9), Murshidabad (+12·0) and Chittagong (+11·5). Of these, three districts belong to the Chittagong Division. Only two districts, namely Jessore (−3·0) and Rajshahi (−4·6), recorded decrease of population during the decade.

The area of the province is 72,514 square miles and the average population per square mile is 688 according to the census of 1931 against 71,703 square miles and 648, respectively, in 1921.

The rural population of the province in 1931 numbered 46,389,495 against 43,411,036 in 1921, which represents an increase of 2,978,459 or 6·9 per cent., whilst the urban population, which was 3,111,257 in 1921, increased during the decade by 400,328 or 12·9 per cent.

4. **The provincial birth and death rates.**—Calculated on the census of 1931 the provincial birth rate for 1931 is 27·8 per mille and the death rate is 22·3 as against 26·6 per mille and 22·4 per mille, respectively, in 1930. Thus there is for births during 1931 as compared with the previous year an increase of 4·5 per cent. and similarly for deaths a

decrease of 0.5 per cent. when compared with the figures for the previous year. Against the quinquennial average of 26.2 and 22.7 per mille, respectively, the births show an increase of 6.1 per cent. and the deaths show a decrease of 1.8 per cent. Thus the birth rate in Bengal during 1931 has gone up, while the death rate has gone down and has reached the lowest level recorded since 1892.

5. Comparison of Bengal vital statistics with those of the other provinces.—

Provinces.	Birth rate per mille of population for the year 1931.	Death rate per mille of population for the year 1931.	Rates of natural increase + or decrease — per mille, 1931.	Infant mortality rates per mille calculated on the number of births registered during the year 1931.		
				Male.	Female.	Total.
Bengal Presidency ..	27.82	22.31	+5.51	179.67	167.85	174.001
Madras Presidency ..	35.54	23.72	+11.82	196.91	175.97	186.43
Bombay Presidency	36.08	23.82	+12.26	170.23	155.24	161.64
United Provinces ..	35.60	26.97	+8.63	185.65	171.68	179.07
Punjab ..	42.72	25.97	+16.75	182.66	173.35	178.26
Central Provinces ..	44.27	35.50	+8.77	278.76	242.78	261.16
Bihar and Orissa ..	33.9	26.6	+7.3	154.3	132.4	143.6
North-West Frontier Province ..	30.73	20.25	+10.48	133.25	122.08	128.39
Burma ..	26.53	17.36	+9.17	202.82	178.34	190.86
Assam ..	28.13	18.68	+9.45	160.37	144.84	152.86

It will thus be seen that the birth rate in Bengal is the lowest on record as compared with that of other provinces with the single exception of that of Burma. The death rate on the other hand is higher than that of Burma, Assam and North-West Frontier Province, but lower than that of the remaining provinces. The rate of natural increase was 5.5 compared with 4.2 per mille in 1930. The infant mortality rate was lower than that in Madras Presidency, United Provinces, the Punjab, Central Provinces and Burma but higher than that in the others.

6. Natural increase of population in Bengal.—There was an increase of 274,907 births over deaths in the province in 1931, compared with 193,675 in the previous year. With the exception of three districts

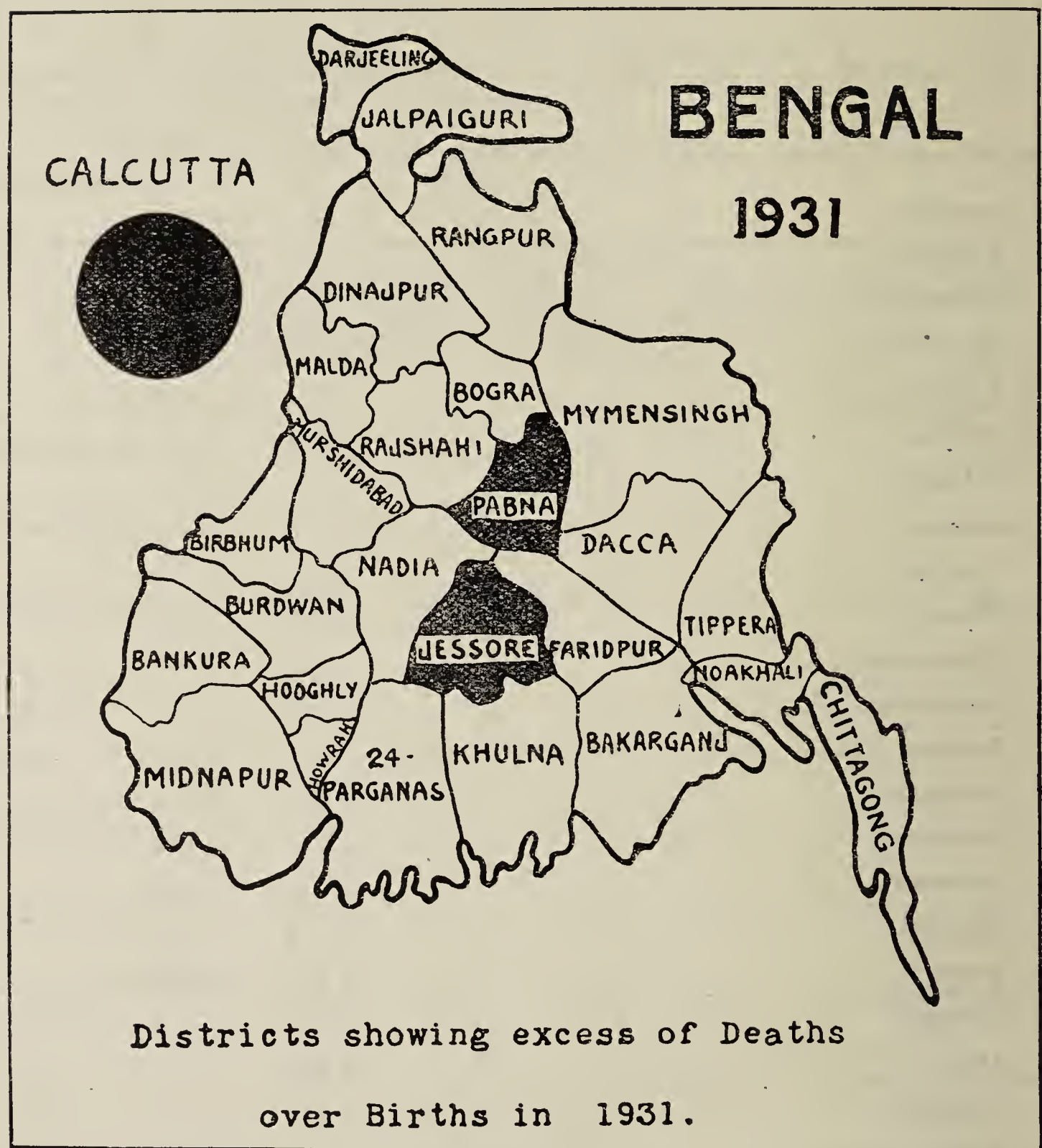
noted below, all the others shared in this increase in varying proportions as shown in the following statement:—

Districts.	Rates of natural increase in districts per mille.		Increase + or decrease —.
	1930.	1931.	
Noakhali	+14·1	+15·5	+
Bakarganj	+9·0	+11·1	+
Murshidabad	+6·6	+9·7	+
24-Parganas	+7·5	+9·5	+
Darjeeling	+4·1	+8·7	+
Birbhum	+12·5	+8·3	—
Jalpaiguri	+5·8	+8·3	+
Khulna	+6·3	+7·7	+
Tippera	+7·7	+7·7	±
Howrah	+3·6	+7·2	+
Mymensingh	+7·8	+6·9	—
Chittagong	+9·4	+6·3	—
Bankura	+5·1	+5·4	+
Midnapur	+6·9	+5·4	—
Dinajpur .. ..	..	+4·9	+
Burdwan	+1·7	+4·6	+
Hooghly	+3·5	+4·5	+
Bogra	+6·5	+3·7	—
Rangpur	+2·1	+3·6	+
Dacca	+5·6	+3·1	—
Faridpur	+1·9	+3·0	+
Nadia .. ..	..	+2·2	+
Rajshahi .. ..	..	+1·9	+
Malda .. ..	..	+0·7	+

In Birbhum, Mymensingh, Chittagong, Midnapur, Bogra and Dacca, the increase during 1931 was less than that in 1930, in Tippera alone the rate of natural increase per mille remained stationary. In all the other districts the rate of natural increase per mille was greater during 1931 than in 1930.

The remaining three districts, namely, Jessore, Calcutta and Pabna, registered an excess of deaths over births in 1931. These three districts showed this peculiarity in 1930 as well. It will be seen that of the seven districts which showed an excess of deaths over births in 1930,

four districts, namely, Nadia, Malda, Rajshahi and Dinajpur, reported an excess of births over deaths in 1931.



Excess of deaths over births.

Districts.	1930.			1931.		
	Birth rates per mille.	Death rates per mille.	Excess of deaths over births per mille.	Birth rates per mille.	Death rates per mille.	Excess of deaths over births per mille.
Jessore ..	19.5	27.0	7.5	24.3	28.1	3.8
Calcutta ..	21.5	28.9	7.4	22.1	25.5	3.4
Pabna ..	22.5	25.5	3.0	25.4	26.9	1.5

7. **Decadent Areas.**—The following statement shows the decadent area in each district of Bengal during the year 1931 compared with the previous year. It appears that fifteen districts showed improvement in their decadent areas, eight a retrogression, while the remaining one showed no change during the year under report. In the districts of Noakhali and Tippera there was no such area. The worst decadence in 1931 was noted in Jessore and Nadia of the Presidency Division, Pabna, Rajshahi, Malda and Rangpur of the Rajshahi Division, Bankura, Burdwan and Midnapur of the Burdwan Division and Faridpur and Dacca of the Dacca Division.

Decadent Areas in Bengal.

Districts.	Total decadent area in square miles.		Percentage of districts.		Improve- ment + or retro- gression —.
	1930.	1931.	1930.	1931.	
Burdwan Division—					
Burdwan	815	712	30·1	26·3	+
Birbhum .. ..	..	247	..	14·5	—
Bankura	330	700	12·6	26·7	—
Midnapore	210	1,284	4·1	24·4	—
Hooghly	275	148	23·1	12·4	+
Howrah	9	10	1·7	1·9	—
Presidency Division—					
24-Parganas	207	106	4·3	2·0	+
Nadia	1,623	898	58·4	31·2	+
Murshidabad	485	71	22·9	3·4	+
Jessore	2,606	2,174	89·7	74·9	+
Khulna	105	235	2·2	5·0	—
Rajshahi Division—					
Rajshahi	1,987	1,094	75·8	41·9	+
Dinajpur	2,457	6	62·3	·1	+
Jalpaiguri	164	75	5·6	2·5	+
Darjeeling	254	124	21·8	10·2	+
Rangpur	1,474	1,369	42·1	39·1	+
Bogra	4	4	·3	·3	±
Pabna	1,118	1,107	66·6	60·9	+
Malda	1,544	700	84·2	39·7	+
Dacca Division—					
Dacca	291	509	10·7	18·8	—
Mymensingh	3	111	·05	1·8	—
Faridpur	919	865	38·7	36·7	+
Bakarganj	7	..	·2	..	+
Chittagong Division—					
Chittagong .. ..	..	103	..	4·0	—
Noakhali .. ..	..	..	..	..	..
Tippera .. ..	..	..	..	..	..

8. **Registration and verification of vital occurrences.**—The system under which the Presidents of union boards, in a majority of cases, have been entrusted with the duties of registration of vital occurrences is not working satisfactorily as already reported on previous occasions. Consequently, the monthly returns of births and deaths are received in my office very late. This unsatisfactory state of affairs was discussed in the Divisional Commissioners' Conference held in October 1930. As a result, an experiment with an alternative system was started in the district of Birbhum by the end of the year under review. The new system is reported to have been working satisfactorily inasmuch as the monthly returns of births and deaths are now being received in my office more quickly and regularly from that district than from any other district.

The table below shows the registration of births and deaths within railway limits. It appears that during the year under report altogether 342 births and 265 deaths were registered within railway areas against 1,053 and 1,005 respectively in the previous year.

Births and deaths within railway limits during the year 1931.

Districts.	Births.	Still-births.	Deaths.								
			Cholera.	Smallpox.	Fevers.	Dysentery.	Diarrhoea.	Respiratory diseases.	Injuries.	Other causes.	All causes.
Burdwan ..			No separate figures are available.								
Birbhum ..	Nil	..	..	..	..	..	..	..	..	..	Nil
Bankura ..	Nil	..	..	..	..	..	..	..	..	..	Nil
Midnapur ..			Not received.								
Hooghly ..	17	..	4	..	14	2	1	2	3	..	26
Howrah ..	7	..	..	..	1	1	1	1	2	..	6
24-Parganas ..	Nil	..	..	..	..	..	..	..	..	..	Nil
Nadia ..	1	..	..	..	2	..	..	1	..	..	3
Murshidabad ..			Not received.								
Jessore ..	7	..	..	1	3	..	..	3	..	..	7
Khulna ..	13	..	2	..	..	1	..	1	..	..	4
Rajshahi ..	3	..	..	..	2	..	..	1	1	1	5
Dinajpur ..	49		Specific causes not mentioned.								
Jalpaiguri ..	34	..	1	1	17	..	..	..	7	49	75
Darjeeling ..	11	..	..	..	7	..	1	..	..	1	9
Rangpur ..	123		Specific causes not mentioned.								
Bogra ..	29	..	5	..	6	2	1	1	1	8	24
Pabna ..	6	..	..	..	..	..	..	..	..	..	..
Malda ..			Not received.								
Dacca ..	Nil	..	..	..	..	..	..	..	..	..	Nil
Mymensingh ..			Not received.								
Faridpur ..	10		Specific causes not mentioned.								
Bakarganj ..			No railway.								
Chittagong ..	12	..	..	..	3	..	..	1	..	..	4
Noakhali ..	3	..	..	..	..	..	..	..	..	..	..
Tippera ..	17	..	1	..	2	2	..	..	..	..	5
Total ..	342	..	13	2	57	8	4	11	14	59	265

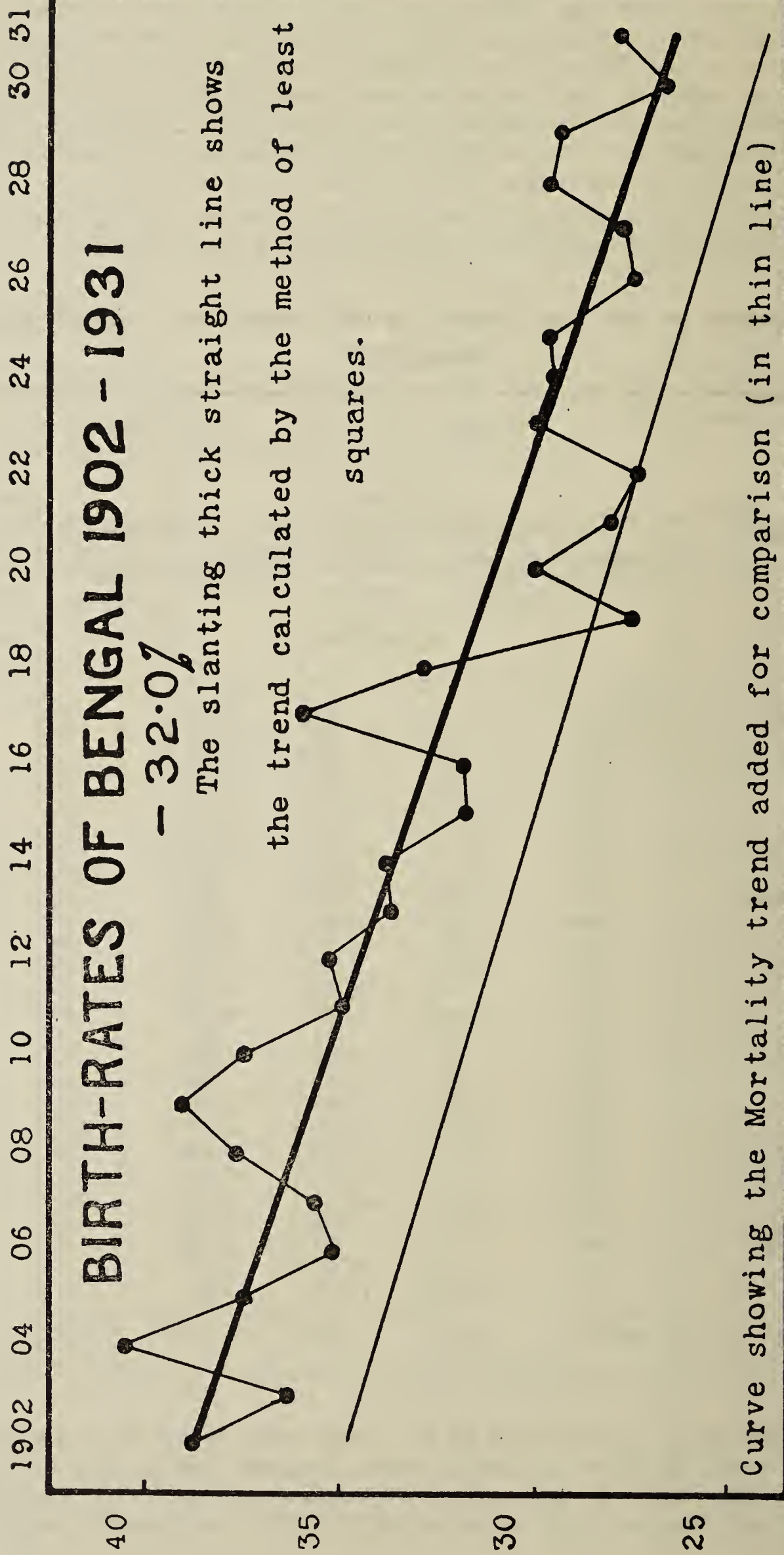
Altogether 296 persons were prosecuted in the rural and in the urban areas for not reporting vital occurrences to the local registrars; of these 208 ended in conviction, 36 in acquittal, 25 cases were struck off or withdrawn and 27 were pending at the end of the year. This year also the number of such prosecutions exceeded 20 in the Chittagong Municipality and in the rural areas of the Sadar Subdivision of the 24-Parganas and also in the Sadar Subdivision of the Nadia district, while in others it was below that number.

The following statement shows the verification of vital occurrences by the vaccination inspecting staff during the year 1931:—

Verification of vital occurrences by the vaccination inspecting staff during 1931.

Districts.	Births.			Deaths.		
	Number examined.	Number of omissions detected.	Percentage of omissions to the total number of cases examined.	Number examined.	Number of omissions detected.	Percentage of omissions to the total number of cases examined.
Burdwan ..	10,447	75	·72	7,179	42	·58
Birbhum ..	1,590	25	1·57	956	16	1·67
Bankura ..	2,051	2	·10	1,465	2	·14
Midnapur ..	6,182	192	3·10	2,966	15	·50
Hooghly ..	3,002	19	·63	2,337	13	·55
Howrah ..	1,904	157	8·24	1,378	43	3·12
24-Parganas ..	7,037	837	11·89	3,016	125	4·14
Nadia ..	3,503	127	3·62	1,816	132	7·27
Murshidabad ..	1,430	49	3·42	994	85	8·55
Jessore ..	2,106	61	2·90	2,060	21	1·02
Khulna ..	1,582	171	10·81	1,114	59	5·29
Rajshahi ..	2,706	251	9·27	1,918	110	5·73
Dinajpur ..	2,312	60	2·59	1,768	48	2·71
Jalpaiguri ..	7,681	41	·53	6,864	22	·32
Darjeeling ..	4,588	11	·24	464	1	·21
Rangpur ..	2,939	88	2·99	2,648	43	1·62
Bogra ..	1,040	27	2·59	789	15	1·90
Pabna ..	1,748	123	7·04	1,890	127	6·72
Malda ..	3,347	632	18·88	3,421	590	17·24
Dacca ..	7,420	167	2·25	4,240	90	2·12
Mymensingh ..	4,095	107	2·61	3,735	91	2·44
Faridpur ..	3,504	523	14·92	2,794	391	13·99
Bakarganj ..	17,479	311	1·78	11,948	134	1·12
Chittagong ..	2,081	5	·24	1,755	1	·05
Noakhali ..	2,575	96	3·73	1,576	35	2·22
Tippera ..	5,138	532	10·35	3,021	197	6·52
Total ..	109,487	4,689	4·28	74,112	2,448	3·30

4·3 per cent. of omissions to the total cases of births examined and 3·3 per cent. of those of deaths were detected during the year under report. The highest percentage of omissions in birth registration (18·88) and also in death registration (17·24) was reported from Malda district.



BIRTHS AND BIRTH RATES.

9. **Provincial births and birth rates.**—Excluding still births, the number of children born during the year 1931 was 722,094 males and 666,125 females or a total of 1,388,219 against 643,885, 594,046 and 1,237,931, respectively, in 1930. The birth rate is 27·8 per mille of population in 1931, against 26·6 per mille in 1930. Thus during 1931 the birth rate shows an increase of 1·2 per mille of population as compared with the corresponding figures for 1930. The birth rate is 26·2 per mille in the previous quinquennium, the birth rate for 1931 being 27·8 per mille. There is an increase of 1·6 per mille of births in 1931 as compared with that of the previous quinquennium. The number of males born to every 100 females in 1931 was 108 and in 1930 the corresponding figures were also 108.

10. **District births and birth rates.**—The lowest birth rate for 1931 was reported from Calcutta, i.e., 22·1 per mille in 1931, as compared with 21·5 per mille for 1930. Tippera district comes next with a birth rate of 22·8 per mille against 23 per mille in the previous year. As compared with 1930, seven districts show a reduction in the birth rate of 1931.

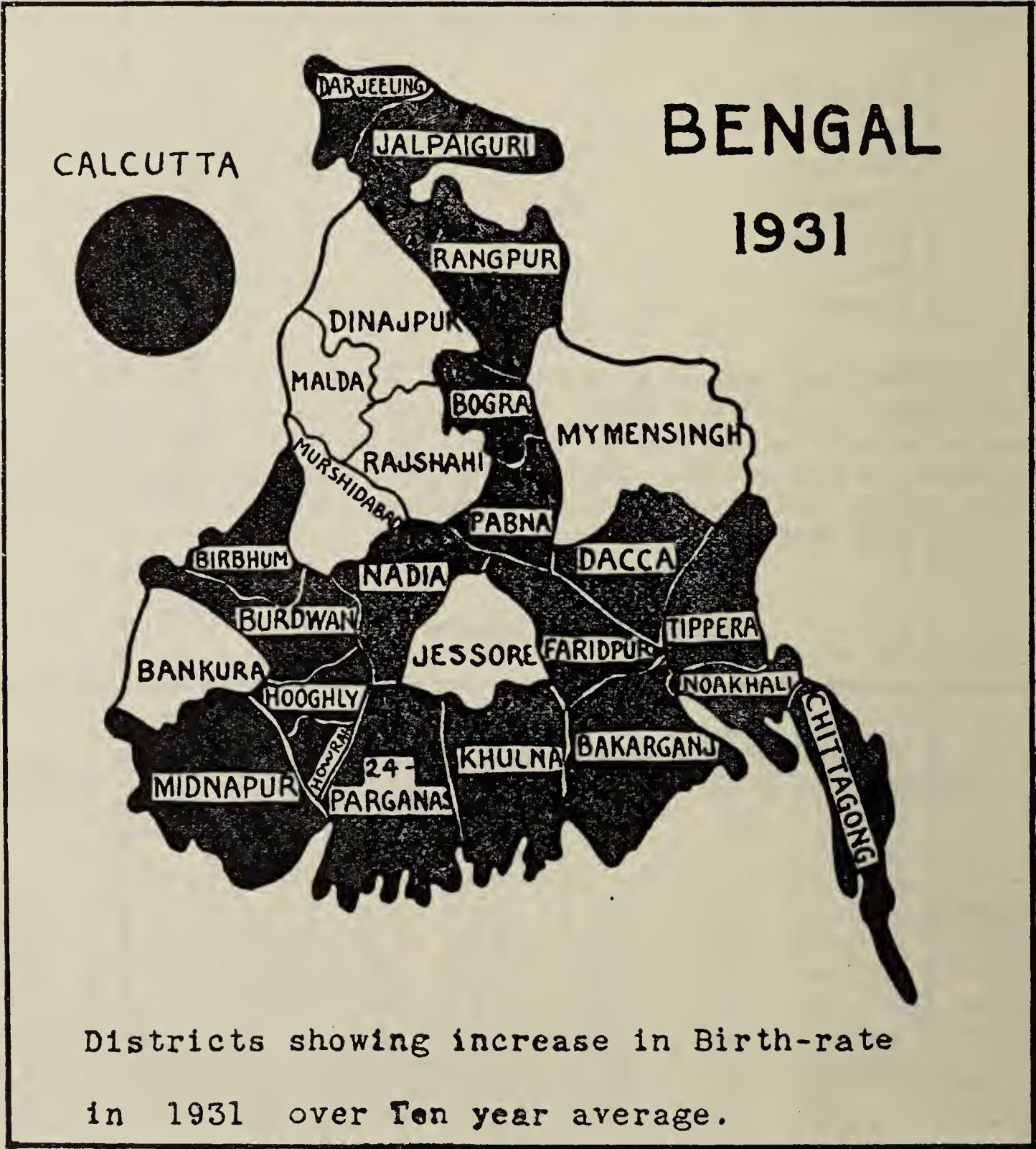
Murshidabad	..	..	..	..	—1·1
Birbhum	..	..	..	..	—3·5
Bankura	..	..	..	..	—2·2
Chittagong	..	..	..	..	—1·7
Dacca	..	..	..	..	—0·8
Bogra	..	..	..	..	—0·3
Tippera	..	..	..	..	—0·2

The highest birth rate was returned from Birbhum district (37·7) and Murshidabad (37·6) per mille, respectively. As compared with the provincial birth rate (which is 27·8 per mille in 1931), 15 districts show higher birth rate in 1931. Compared with the previous decennium the birth rate for 1931 was lower in six districts. Against 1930, the birth rate for 1931 was reduced in seven districts.

Birth rates per mille in districts.

Districts.	Average birth rates for previous ten years.	Birth rates per mille for 1931.	Difference between birth rates for 1931 and the decennial average.	Percent-ages of difference.	Birth rates per mille for 1930.	Difference between birth rates for 1931 and 1930.	Percent-ages of difference.
Murshidabad	37·9	37·6	—0·3	—0·8	38·7	—1·1	—2·9
Birbhum	34·4	37·7	+3·3	+9·6	41·2	—3·5	—8·5
Rajshahi	33·3	32·6	—0·7	—2·1	26·6	+6·0	+22·5
Dinajpur	32·6	29·5	—3·1	—9·5	27·1	+2·4	+8·8
Nadia	31·9	33·5	+1·6	+5·0	27·2	+6·3	+23·1
Bankura	31·6	28·3	—3·3	—10·5	30·5	—2·2	—7·2
Jalpaiguri	30·7	33·4	+2·7	+8·8	32·9	+0·5	+1·5
Malda	30·7	30·0	—0·7	—2·3	27·5	+2·5	+9·1
Darjeeling	29·6	36·8	+7·2	+24·3	35·3	+1·5	+4·2
Noakhali	27·8	35·1	+7·3	+26·2	34·5	+·6	+1·7
Rangpur	27·7	28·9	+1·2	+4·3	24·1	+4·8	+19·9
Midnapur	27·5	27·9	+0·4	+1·4	27·8	+0·1	+0·3

Districts.	Average birth rates for previous ten years.	Birth rates per mille for 1931.	Difference between birth rates for 1931 and the decennial average.	Percent-ages of difference.	Birth rates per mille for 1930.	Difference between birth rates for 1931 and 1930.	Percent-ages of difference.
Burdwan ..	26.9	27.0	+0.1	+0.3	25.2	+1.8	+7.1
Faridpur ..	26.9	29.0	+2.1	+7.8	26.9	+2.1	+7.8
Chittagong ..	26.8	28.0	+1.2	+4.4	29.7	-1.7	-5.7
Bakarganj ..	26.4	27.4	+1.0	+3.8	26.4	+1.0	+3.8
Jessore ..	26.1	24.3	-1.8	-6.9	19.5	+4.8	+24.6
Khulna ..	26.0	29.1	+3.1	+11.9	25.8	+3.3	+12.8
Dacca ..	24.9	26.1	+1.2	+4.8	26.9	-0.8	-3.0
Hooghly ..	24.7	25.0	+0.3	+1.2	23.9	+1.1	+4.6
Howrah ..	24.4	25.7	+1.3	+5.3	24.8	+0.9	+3.6
Pabna ..	24.1	25.4	+1.3	+5.4	22.5	+2.9	+12.9
Mymensingh ..	24.1	24.1	±0	±0	24.0	+0.1	+0.4
Bogra ..	23.7	24.6	+0.9	+3.8	24.9	-0.3	-1.2
24-Parganas ..	22.3	26.0	+3.7	+16.6	25.8	+0.2	+0.8
Tippera ..	19.8	22.8	+3.0	+15.1	23.0	-0.2	-0.9
Calcutta ..	16.4	22.1	+5.7	+34.7	21.5	+0.6	+2.8



11. **Births and birth rates in municipalities.**—The aggregate birth rate in towns in 1931 was 20·8 per mille against 20·3 per mille in 1930, and thus shows a slight increase over 1930 (i.e., by 2·4 per cent.). Thirteen towns returned rates above the provincial average (which is 27·8). Ten municipalities registered birth rates between 30 and 40 per mille; 39 municipalities between 20 and 30; 55 municipalities between 10 and 20 and 14 municipalities below 10. These are as follows:—

Towns returning absurd birth rates.

				1930.	1931.
Dinajpur	..	..	..	4·2	9·9
Khulna	..	..	..	8·8	9·7
Chandpur	..	..	..	11·5	9·6
Gobardanga	..	..	..	7·0	9·3
Halisahar	..	..	..	19·5	9·1
Jessore	..	..	..	12·5	9·1
Suri	..	..	..	15·8	8·8
Gauripur	..	..	..	4·6	8·1
Comilla	..	..	..	9·6	8·0
Bansberia	..	..	..	21·5	7·9
Barrackpur	..	..	..	7·8	7·9
Pabna	..	..	..	7·2	6·5
Bogra	..	..	..	9·5	6·3
Dum Dum	..	..	..	6·5	4·7

It will appear from the above list that with the exception of four municipalities all the others have become still worse, especially so in Halisahar and Bansberia.

12. **Births and birth rates in rural areas.**—The aggregate birth rate in rural areas in 1931, 28·3 per mille, was higher by 4·4 per cent. than that in the previous year (27·1 per mille). In 287 circles it was higher than the provincial average. Classifying the birth rates according to the registering circles, 33 returned rates above 40 (Behala in the 24-Parganas and Kandi in Murshidabad showed the highest rate, 46·4 each), 206 between 30 and 40, 256 between 20 and 30, 40 between 10 and 20, and one below 10 per mille (Jamalpur in Burdwan 8·9).

13. **Seasonal incidence of births.**—The provincial birth rate was highest in March and lowest in July and August 1931 (3·1 in March and 1·6 in July and August). The provincial birth rate was higher in 1931, February, March, May, June, August and September. It was

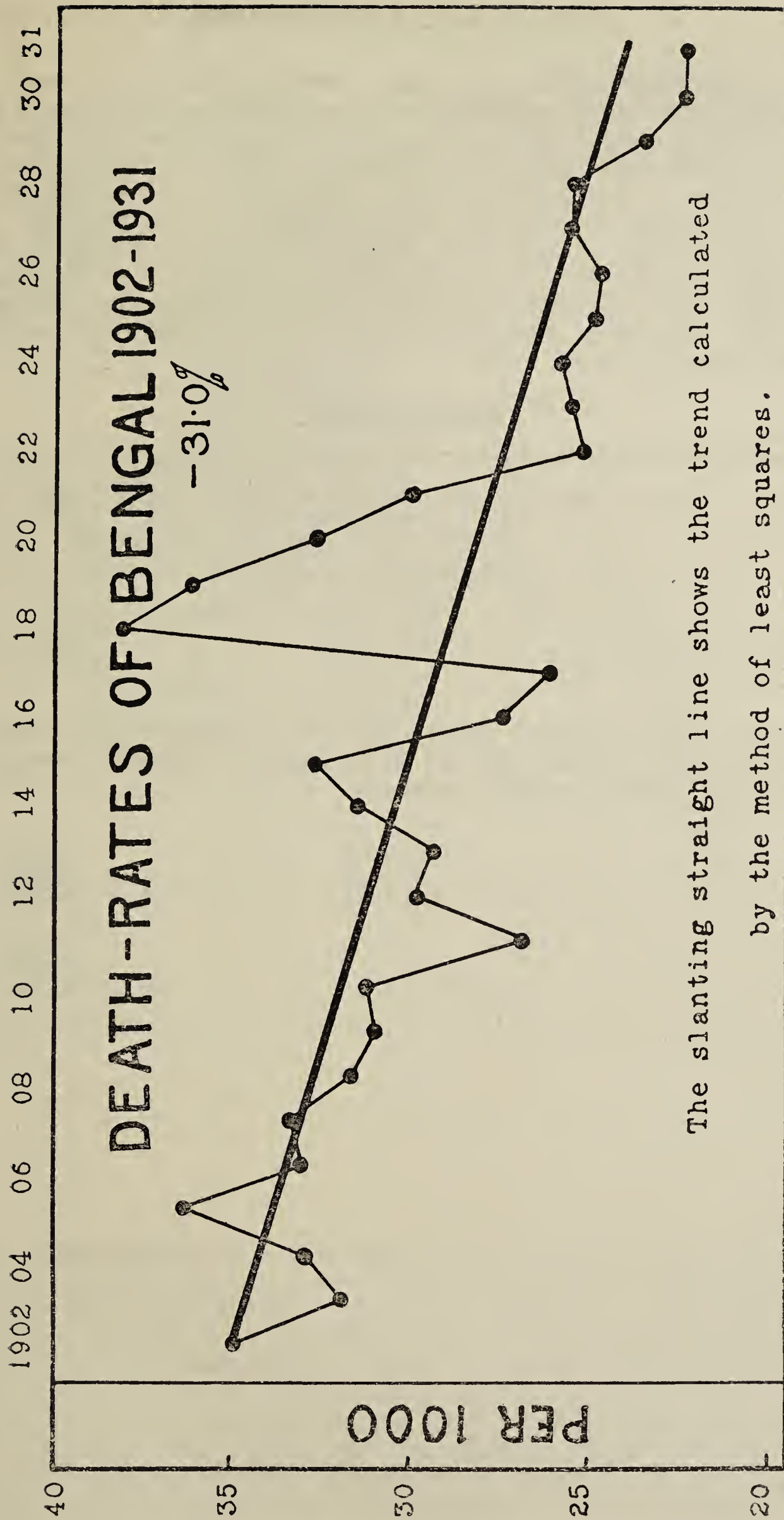
equal in January, April, July and November 1931 and lower in October and December 1931 as compared with the figures for 1930:—

Seasonal incidence of births.

Months.	Provincial monthly birth rates.		Difference.	Percentage of difference.
	1930.	1931.		
January	2.7	2.7	±0	±0
February	2.4	2.6	+0.2	+8.3
March	2.6	3.1	+0.5	+19.2
April	2.4	2.4	±0	±0
May	1.9	2.0	+0.1	+5.2
June	1.7	1.9	+0.2	+11.7
July	1.6	1.6	±0	±0
August	1.4	1.6	+0.2	+14.3
September	1.7	1.9	+0.2	+11.7
October	2.4	2.3	-0.1	-4.2
November	2.8	2.8	±0	±0
December	3.0	2.8	-0.2	-6.7

14. **Still-births.**—47,359 still-births were registered during 1931 against 47,428 in 1930 and 53,886 in 1929. This number is the lowest on record since 1911. The proportion of still-births to total births was 3.30 in 1931 compared with 3.69 in the previous year. The following table shows the distribution of the proportion of still-births to total births in the various districts of the province:—

Districts.	Proportion of still-births to total births (per cent.).		Increase + or decrease —.
	1930.	1931.	
Noakhali	6.21	5.71	—
Chittagong	6.16	5.01	—
Jalpaiguri	6.10	6.05	—
Calcutta	5.92	6.71	+
Pabna	5.82	4.67	—
Rajshahi	5.79	3.91	—
Bogra	5.70	6.23	+
Darjeeling	5.41	5.86	+
Rangpur	5.26	4.05	—
Mymensingh	4.80	4.47	—
Tippera	4.68	4.09	—
Dacca	4.13	3.86	—
Murshidabad	3.86	3.44	—
Jessore	3.40	3.34	—
Khulna	3.25	3.36	+
Faridpur	3.17	3.40	+
Midnapur	3.02	2.61	—
Birbhum	2.58	2.21	—
Nadia	2.28	1.81	—
Howrah	2.16	1.67	—
Dinajpur	2.11	1.61	—
Bakarganj	1.87	1.68	—
Malda	1.44	1.03	—
Burdwan	1.14	1.00	—
24-Parganas	0.78	0.48	—
Hooghly	0.43	0.36	—
Bankura	0.38	0.63	+
Total average for the province	3.69	3.30	—



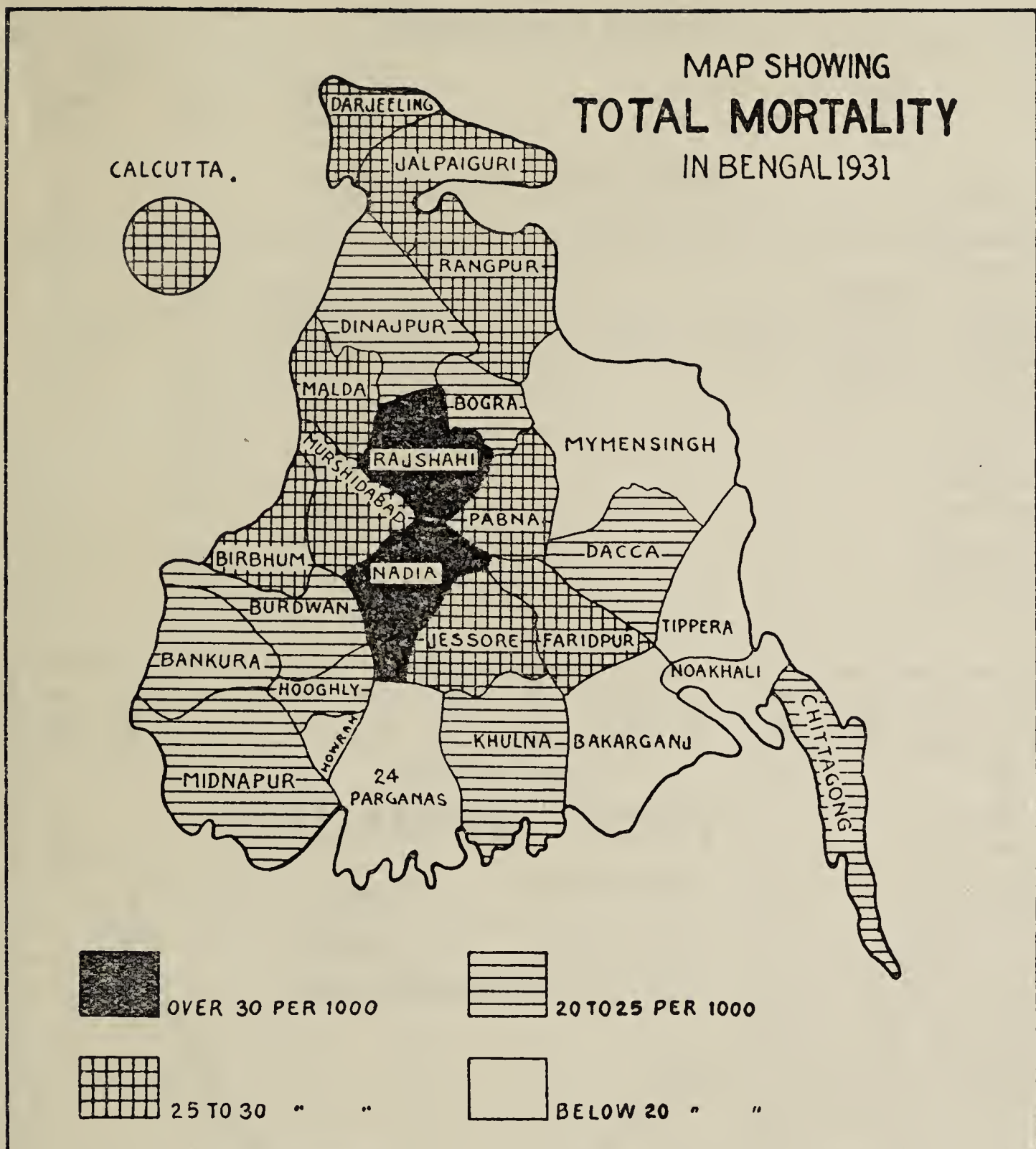
DEATHS AND DEATH RATES.

15. **Provincial deaths and death rates.**—During the year 1931, 1,113,312 deaths were registered in the province, representing a death rate of 22·3 per mille from all causes. The corresponding figure for the year 1930 is 1,044,256 or 22·4 per mille and 22·7 during the previous quinquennium. The death rate was still further reduced by 0·5 per cent. as compared with 1930. It was reduced by 1·8 per cent. when compared with the quinquennial figure. It was thus lowest on record since 1909. 572,800 males and 540,512 females died during the year 1931, while 539,260 males and 504,996 females died during the year 1930. 105 males died to every 100 females. The death rate from various causes is shown below:—

Causes of deaths.

Years.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	Respira- tory diseases.	Injuries.	All other causes.	All causes.
1931 ..	1·6	·2	14·7	·9	1·2	·4	3·3	22·3
1930 ..	1·2	·2	15·1	·8	1·2	·4	3·4	22·4
Percentage of difference ..	+33·3	±	−2·7	+12·5	±	±	−3·0	−0·5

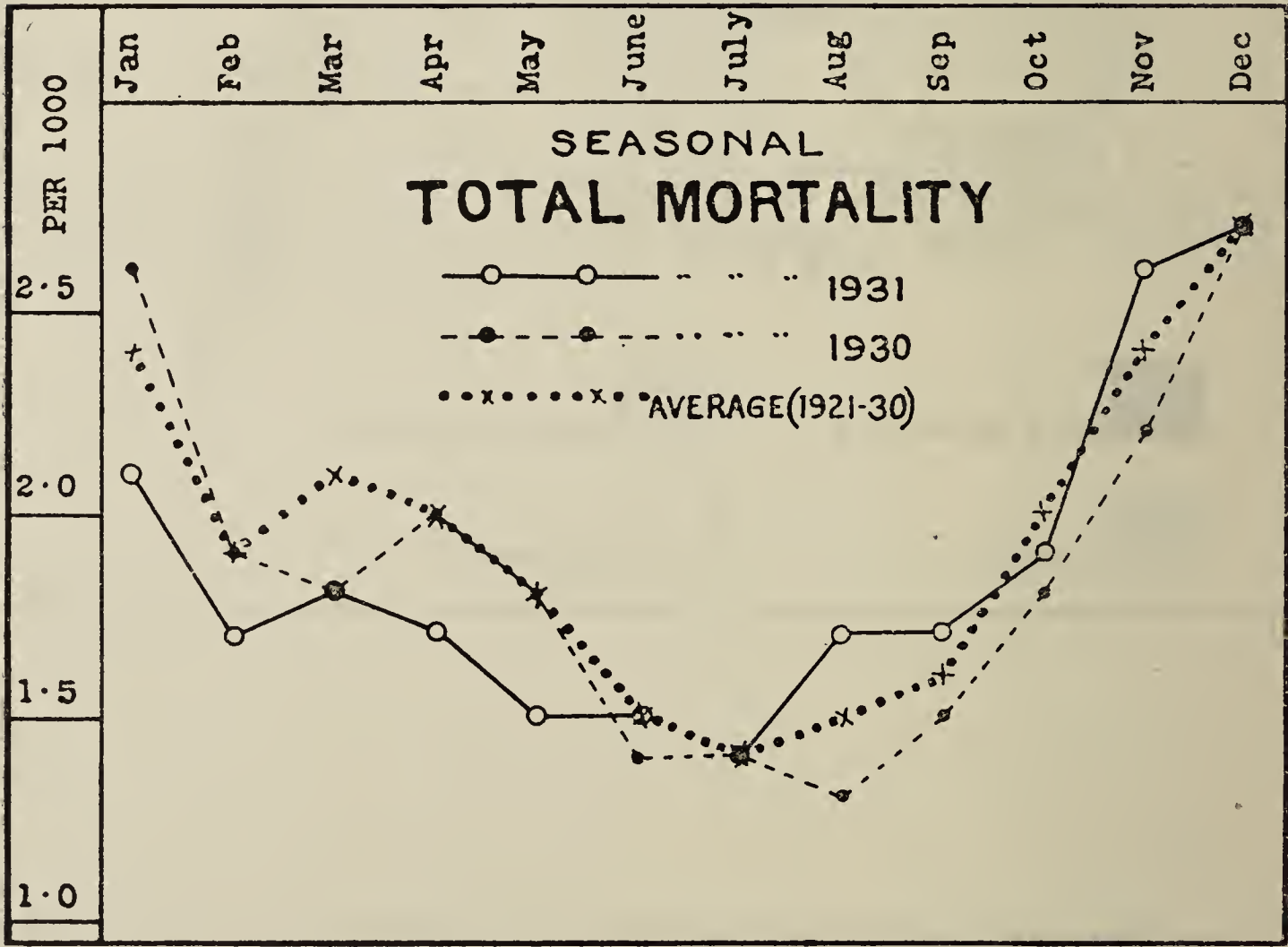
Thus there is an increase in cholera, dysentery and diarrhœa, while there is a diminution in fevers and all other causes. Smallpox, respiratory diseases and injuries remain stationary.



16. **Seasonal incidence of mortality.**—The highest rates of mortality per month, viz., 2·7 and 2·6 per mille, were registered in December and November 1931, respectively. The lowest rate, i.e., 1·4 per mille, was recorded in July 1931. The death rate in 1931 was lower than the decennial average during the months of January, February, March, April, May and October, higher during August, September and November, and remained stationary during June, July and December. Compared with 1930, these figures for 1931 showed a slight increase during the months of June, August, September, October and November, were reduced in January, February, April and May and were the same during the remaining months.

Seasonal total mortality.

Months.					Decennial average, 1921-30.	Year, 1930.	Year, 1931.
January	..	..	..	..	2.4	2.6	2.1
February	..	..	..	..	1.9	1.9	1.7
March	..	..	..	..	2.1	1.8	1.8
April	..	..	..	..	2.0	2.0	1.7
May	..	..	..	..	1.8	1.8	1.5
June	..	..	..	..	1.5	1.4	1.5
July	..	..	..	..	1.4	1.4	1.4
August	..	..	..	..	1.5	1.3	1.7
September	..	..	..	..	1.6	1.5	1.7
October	..	..	..	..	2.0	1.8	1.9
November	..	..	..	..	2.4	2.2	2.6
December	..	..	..	..	2.7	2.7	2.7



17. **District deaths and death rates.**—Seventeen out of 27 districts returned death rates above the provincial average which is 22.3 per mille. Nadia once again tops the list with a rate of 31.3 per mille. This figure is a fall on the corresponding figure for 1930 which is 32.8 per mille. Tippera and Bakarganj returned the lowest rates, there being 15.1 and 16.3 per mille, respectively. Eight districts showed an increase and 19 districts a decrease as compared with the corresponding figures for the previous decennium. The districts showing an

increase are Nadia, Birbhum, Malda, Pabna, Faridpur, Chittagong, Dacca and Tippera. Compared with the previous year the death rate was reduced in 14 districts.

Death rates per mille in districts.

Districts.	Average death rates for previous ten years.	Death rates per mille for 1931.	Difference between death rates of 1931 and the decennial average.	Percentages of difference.	Death rates per mille for 1930.	Difference between death rates of 1930 and 1931.	Percentages of difference.
Rajshahi ..	36·0	30·7	-5·3	-14·7	30·7	±0	±0
Dinajpur ..	31·2	24·7	-6·5	-20·8	27·9	-3·2	-11·5
Nadia ..	31·0	31·3	+0·3	+0·9	32·8	-1·5	-4·6
Jessore ..	30·8	28·1	-2·7	-8·8	27·0	+1·1	+4·1
Darjeeling ..	29·5	28·1	-1·4	-4·8	31·2	-3·1	-9·9
Murshidabad ..	28·6	27·9	-0·7	-2·5	32·1	-4·2	-13·1
Calcutta ..	26·9	25·5	-1·4	-5·2	28·9	-3·4	-11·8
Jalpaiguri ..	26·8	25·1	-1·7	-6·4	27·1	-2·0	-7·4
Rangpur ..	26·1	25·3	-0·8	-3·1	22·0	+3·3	+15·0
Birbhum ..	25·7	29·4	+3·7	+14·4	28·7	+0·7	+2·4
Malda ..	25·7	29·3	+3·6	+14·0	32·2	-2·9	-9·0
Pabna ..	24·8	26·9	+2·1	+8·4	25·5	+1·4	+5·5
Bankura ..	24·4	22·9	-1·5	-6·2	25·4	-2·5	-9·9
Hooghly ..	24·3	20·5	-3·8	-15·6	20·4	+0·1	+0·4
Burdwan ..	24·2	22·4	-1·8	-7·5	23·5	-1·1	-4·7
Faridpur ..	24·0	26·0	+2·0	+8·3	25·0	+1·0	+4·0
Howrah ..	23·1	18·5	-4·6	-19·9	21·2	-2·7	-12·7
Midnapur ..	23·0	22·5	-0·5	-2·2	20·9	+1·6	+7·6
Bogra ..	22·7	20·9	-1·8	-8·0	18·4	+2·5	+13·6
Khulna ..	21·6	21·4	-0·2	-0·9	19·5	+1·9	+9·7
Bakarganj ..	21·6	16·3	-5·3	-24·5	17·4	-1·1	-6·3
Chittagong ..	21·5	21·7	+0·2	+0·9	20·3	+1·4	+6·9
24-Parganas ..	21·1	16·5	-4·6	-21·8	18·3	-1·8	-9·9
Noakhali ..	20·5	19·6	-0·9	-4·4	20·4	-0·8	-3·9
Dacca ..	20·3	23·0	+2·7	+13·3	21·3	+1·7	+8·0
Mymensingh ..	19·9	17·2	-2·7	-13·6	16·2	+1·0	+6·1
Tippera ..	14·9	15·1	+0·2	+1·3	15·3	-0·2	-1·3

18. **Deaths and death rates in towns.**—67,145 deaths with an aggregate death rate of 19·1 per mille were registered in the towns of Bengal in 1931 against 67,964 deaths with a rate of 21·8 per mille in 1930. This shows a reduction of 819 in the total number of deaths and 12·4 per cent. in the death rate. The rate was 10·8 per cent. less compared with the previous quinquennium. Eighteen out of the 118 towns returned death rates above the provincial average, Sonamukhi

with 32·6 per mille heading the list. Two towns, viz., Sonamukhi and Kurseong, returned death rates between 30 and 40 per mille, 24 towns between 20 and 30, 65 towns between 10 and 20. The following 27 towns recorded rates which are absurd:—

Towns returning absurd death rates.

Towns.	Death rates.	
	1930.	1931.
Midnapur	14·3	9·5
Kanchrapara	15·7	9·5
Kishoreganj	7·4	9·3
Kharda	12·9	9·2
Jhalakati	7·5	8·9
Barasat	9·7	8·8
Rangpur	12·9	8·8
Champdani	8·4	8·7
Madaripur	12·1	8·7
Bally	12·2	8·6
Chandpur	11·1	8·5
Dum-Dum	6·5	8·4
Baruipur	8·2	8·2
Muktagacha	8·1	7·7
Patuakhali	6·0	7·6
Gaibandha	7·8	7·4
Bajitpur	9·0	7·4
Nalchiti	12·4	7·2
Naihati	11·1	6·3
Bhola	6·8	6·3
Pabna	8·8	6·2
Bogra	7·5	6·1
Comilla	6·2	6·0
Halisahar	12·2	5·9
Garulia	8·3	5·8
Barrackpur	6·0	4·6
Gauripur	5·5	3·2

With the exception of five towns in which there has been a slight improvement in the registration, the rest have returned rates which are even lower than those of the previous year. Year after year this neglect in the accurate registration of vital occurrences is noticed in these reports and the attention of the local authorities is invited to this defect, but all to no avail.

19. **Deaths and death rates in rural areas.**—In 1931 the rural areas in the province returned 1,046,167 deaths and an aggregate death rate of 22·5 per mille, compared with a total of 976,292 deaths and a death rate of 22·5 in 1930. The number was increased by 69,875, the rate being the same owing to the increase of population according to the census of 1931. Compared with the mean of the previous five years the rate decreased by 1·3 per cent. In 287 circles the death rate was

higher than the provincial average. 10 circles returned rates above 40 per mille, the highest (46.5) being in Jibannagar in the district of Nadia, 106 circles between 30 and 40, 241 between 20 and 30, 175 between 10 and 20 and 4 below 10 per mille (Debidwar in Tippera 9.8, Bauria in Howrah 9.6, Jamalpur in Burdwan 7.9 and Iswarganj in Mymensingh 6.6).

20. **Comparison of death rates in towns with those in rural areas.**—In the urban areas the death rates were less than in the rural areas during 1931 with reference to cholera, fevers and all causes. The total death rate in the rural areas was, however, higher than in the urban areas owing to the higher prevalence of fevers in the former.

Causes.	During 1931.	
	Urban.	Rural.
Cholera	0.9	1.6
Smallpox .. .	0.6	0.1
Plague .. .	0.0003	..
Fevers .. .	3.9	15.5
Dysentery and diarrhoea .. .	2.1	0.8
Respiratory diseases .. .	4.7	1.0
Injuries .. .	0.4	0.4
Other causes .. .	6.4	3.1
All causes .. .	19.1	22.5

21. **Comparison of Calcutta death rates with those of other Bengal towns and rural areas.**—The Calcutta death rate was lower than that in the towns as well as in the rural areas with respect to fevers only. Its cholera death rate was also lower than that in the rural areas.

Causes.	Calcutta, 1931.	Bengal towns, 1931.	Bengal rural areas, 1931.
Cholera	1.0	0.9	1.6
Smallpox .. .	0.7	0.5	0.1
Plague .. .	0.001	..	..
Fevers .. .	2.9	4.4	15.5
Dysentery and diarrhoea .. .	2.4	2.0	0.8
Respiratory diseases .. .	8.2	2.9	1.0
Injuries .. .	0.6	0.4	0.4
Other causes .. .	9.6	4.8	3.1
All causes .. .	25.5	15.8	22.5

Turning to subsidiary heads with the exception of malaria and other fevers, all the other diseases appear to have prevailed more in Calcutta in 1931 than in the towns of Bengal as well as in the rural areas. This is rather due to a more accurate diagnosis obtaining in Calcutta than elsewhere. No death from relapsing fever was reported in Calcutta. Deaths from childbirth were much less in Calcutta than in other places.

Causes.	Death rates per mille in 1931.		
	Calcutta.	Other Bengal towns.	Rural areas.
Malaria	·64	·96	7·46
Enteric fever	·63	·26	·24
Measles	·12	·04	·06
Relapsing fever .. .. .	..	·003	·12
Kala-azar	·24	·17	·20
Other fevers	1·27	2·94	7·39
Dysentery	1·34	1·18	·42
Diarrhœa	1·13	·78	·34
Influenza	·41	·03	·09
Pneumonia	3·00	1·37	·44
Phthisis	2·22	·46	·18
Other respiratory diseases	2·53	1·02	·27
Childbirth	·07	·22	·22

22. **Deaths from maternal causes.**—10,687 deaths from maternal causes were registered in the province in 1931 compared with 9,515 in the previous year. Of the total deaths from this cause, 584 were returned from the towns and the rest from the rural areas. The provincial death rate was 7·7 per 1,000 births being the same as in 1930. There was an increase of 1·5 and 8·4 per cent., respectively, in Burdwan and Chittagong Divisions and a reduction in the remaining divisions.

Deaths from maternal causes.

Divisions.				Deaths (1931).	Rates per 1,000 births, 1930.	Rates per 1,000 births, 1931.	Increase + or decrease —.
Burdwan .. .. .	..	..	..	1,659	6·7	6·8	+
Presidency .. .. .	..	..	..	1,880	6·6	6·5	—
Rajshahi .. .. .	..	..	..	3,550	11·4	11·3	—
Dacca .. .. .	..	..	..	2,198	6·4	6·1	—
Chittagong .. .. .	..	..	..	1,400	7·1	7·7	+
Total				10,687	7·7	7·7	±

23. **Mortality according to sex.**—572,800 males and 540,512 females died in 1931 against 539,260 males and 504,996 females in the previous year. As compared with the previous year, the death rates 22·1 for males and 22·5 for females in 1931 decreased by 1·4 per cent. for males, being unchanged as regards the female death rate. Compared with the average of the previous quinquennium, the reduction was 2·2 per cent. for males and 1·3 per cent. for the females. The

female death rate exceeded that for the males in 15 out of the 27 districts of the province. The highest rate for male deaths, 31.1 per mille, was returned from Nadia district and that for females 35.8 per mille from Calcutta. The lowest rates for both sexes (15.3 and 14.8) were registered in Tippera district.

24. **Mortality according to class.**—Classified according to class, 612,360 Mussalmans, 469,946 Hindus, 2,330 Christians, 3,065 Buddhists and 25,611 other classes died during 1931, the death rates for Hindus being 21.8 per mille and for Mussalmans being 22.3 per mille. During 1930 the death rate among Hindus as also among the Mussalmans was 22.3 per mille. Thus it will be seen that the death rate in 1931 among Hindus is the lowest on record since 1911. The death rate among the Mussalmans is the same as in the previous year and is also the lowest on record since 1911.

Deaths among classes.

Classes.				Ratio of deaths per mille, 1930.	Ratio of deaths per mille, 1931.	Difference.	Percen- tages of difference.
Christians	..	..	..	14.9	13.0	—1.9	—12.8
Hindus	..	..	..	22.3	21.8	—0.5	—2.3
Mussalmans	..	..	..	22.3	22.3	±0	±0
Buddhists	..	..	..	19.9	19.1	—0.8	—4.0
Other classes	..	..	..	32.6	47.6	+15.0	+46.0
Total				22.4	22.3	—0.1	—0.4

The highest death rate (34.4 per mille) was recorded both for Hindus and Mussalmans in the Darjeeling district. The lowest rates were 15.8 for Hindus and 14.8 for Mussalmans in the Tippera district.

25. **Mortality according to age.**—The death rate for every age period was reduced in 1931 compared with that during the previous year except in the case of the periods between (i) 5 to 20 and (ii) 40 years and above. In the age period 60 years and above the increase is by 22.9 per cent. In the age period 5 to 10 years the increase amounts to 25.8 per cent. Stated in terms of comparison, the following table will show the maximum percentages of variation during the year 1931:—

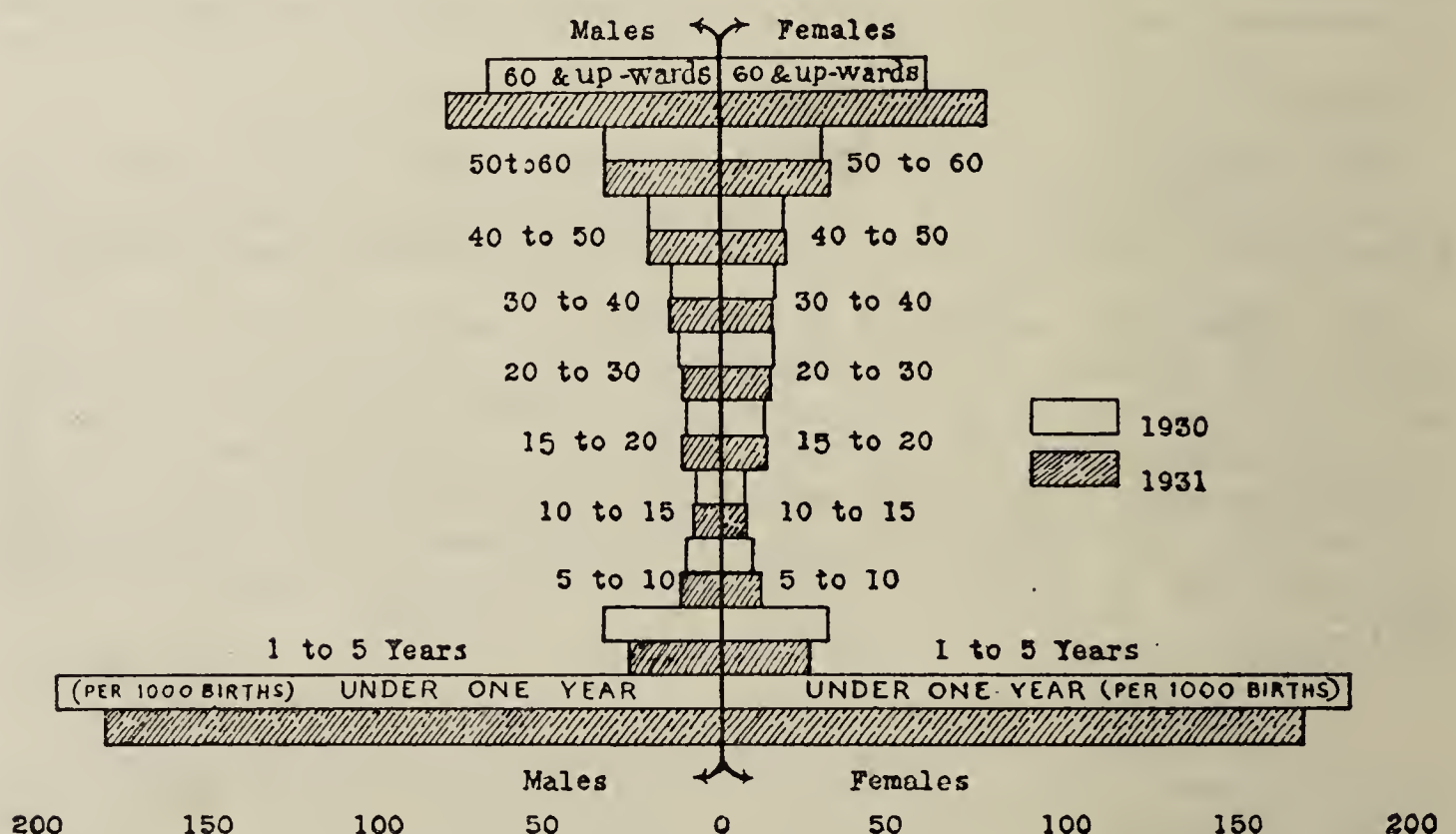
Age periods.						Percentage variations.
5 to 10 years	..	..	..	..	..	25.8
60 years and above	..	..	..	..	..	22.9
15 to 20 years	..	..	..	..	..	6.6
10 to 15 years	..	..	..	..	..	5.5
50 to 60 years	..	..	..	..	..	3.1
40 to 50 years	..	..	..	..	..	1.0

Mortality according to age.

Age periods.			1930, per mille.	1931, per mille.	Difference.	Percentage variation.
Under one month*	..	..	105.0	99.8	-5.2	-5.0
1 to 6 months*	..	..	50.0	46.4	-3.6	-7.2
6 to 12 months*	..	..	32.3	27.8	-4.5	-13.9
Under one year*	..	..	187.3	174.0	-13.3	-7.1
1 to 5 years	..	..	32.8	26.4	-6.4	-19.5
5 to 10 years	..	..	9.7	12.2	+2.5	+25.8
10 to 15 years	..	..	7.3	7.7	+0.4	+5.5
15 to 20 years	..	..	12.0	12.8	+0.8	+6.6
20 to 30 years	..	..	13.8	13.0	-0.8	-5.8
30 to 40 years	..	..	15.4	14.9	-0.5	-3.3
40 to 50 years	..	..	19.9	20.1	+0.2	+1.0
50 to 60 years	..	..	31.8	32.8	+1.0	+3.1
60 years and above	..	..	63.8	78.4	+14.6	+22.9

*Per 1,000 births.

DEATH RATE AT EACH AGE PERIOD

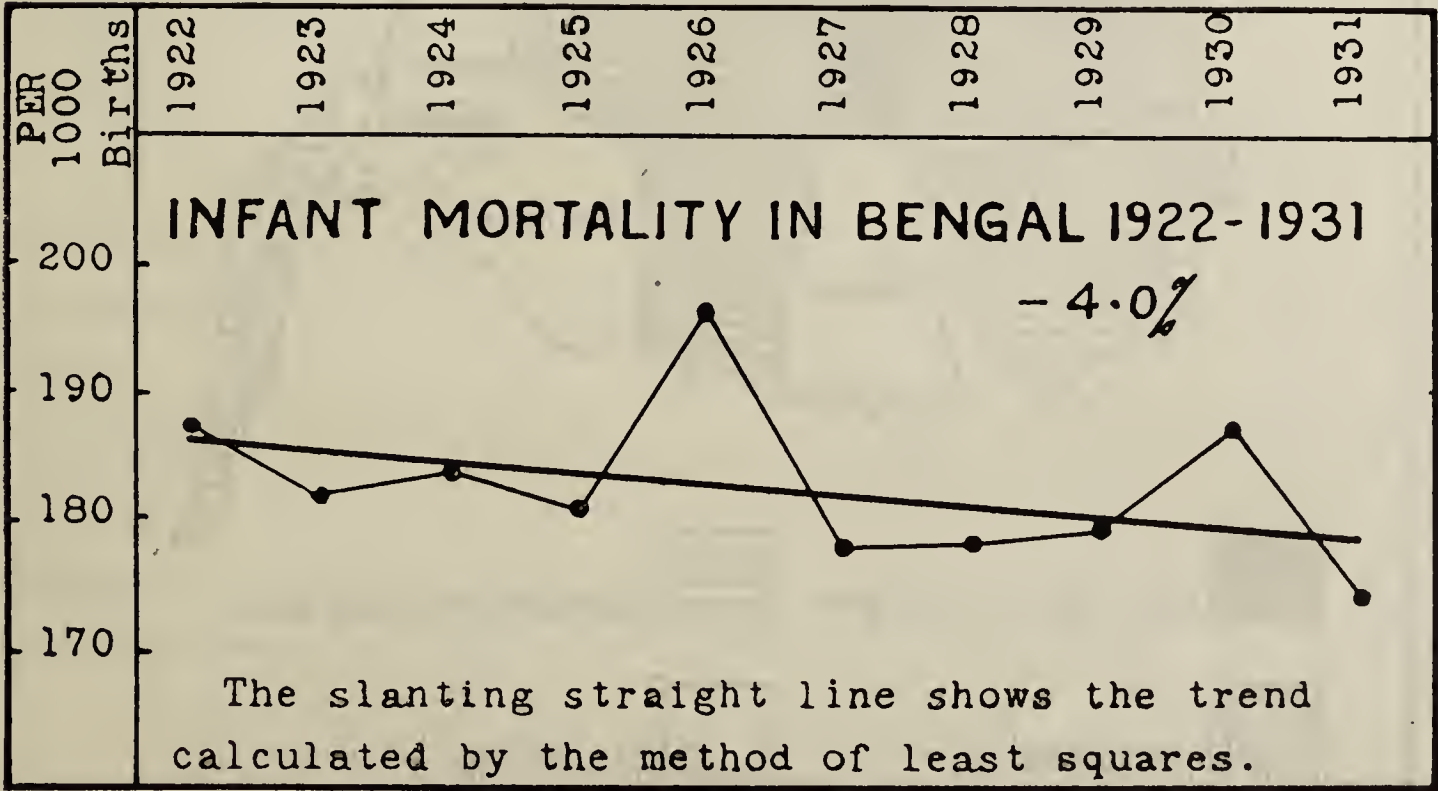


Classified according to sex, it would appear that more females died than males between the ages of 10 to 40 years, which is taken as the child-bearing period of life. This difference is best marked during the 15 to 30 years age period.

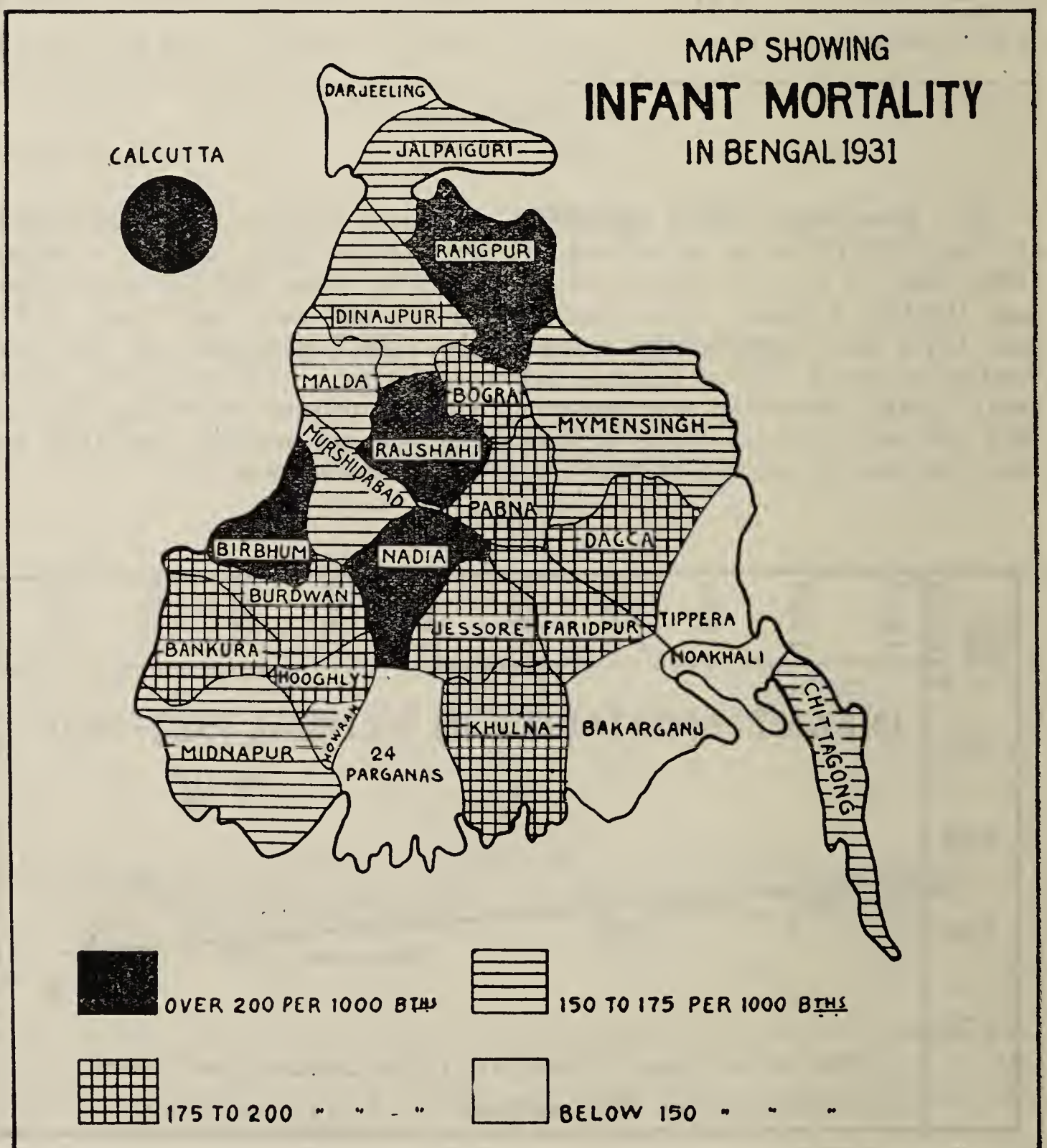
Age periods.			Death rate per 1,000 living at various ages.			
			Males.	Females.	Difference.	Percentages.
Infants*	..	..	179.7	167.8	+11.9	+7.1
1—5 years	..	..	27.3	25.7	+1.6	+6.2
5—10 years	..	..	12.2	12.2	±0	±0
10—15 years	..	..	7.8	7.6	+0.2	+2.6
15—20 years	..	..	11.1	14.3	−3.2	−22.4
20—30 years	..	..	10.9	15.1	−4.2	−27.8
30—40 years	..	..	14.2	15.8	−1.6	−10.1
40—50 years	..	..	20.5	19.5	+1.0	+5.1
50—60 years	..	..	33.7	31.9	+1.8	+5.6
Over 60 years	..	..	79.5	77.2	+2.3	+2.9

*Per 1,000 births.

26. **Provincial infant mortality.**—241,552 infants under one year, of whom 129,740 were males and 111,812 females, died in 1931. During 1930, 231,872 infants under one year died, of these 124,212 were males and 107,660 females. The death rates for the two years were 174.0 and 187.3 per 1,000 births, respectively. 21.7 per cent. of the total deaths occurred among infants below one year. 57.3 per cent. of the total infant mortality was recorded among infants under one month, 26.7 per cent. among those between one and six months and 16.0 per cent. at the age period of between six and twelve months.

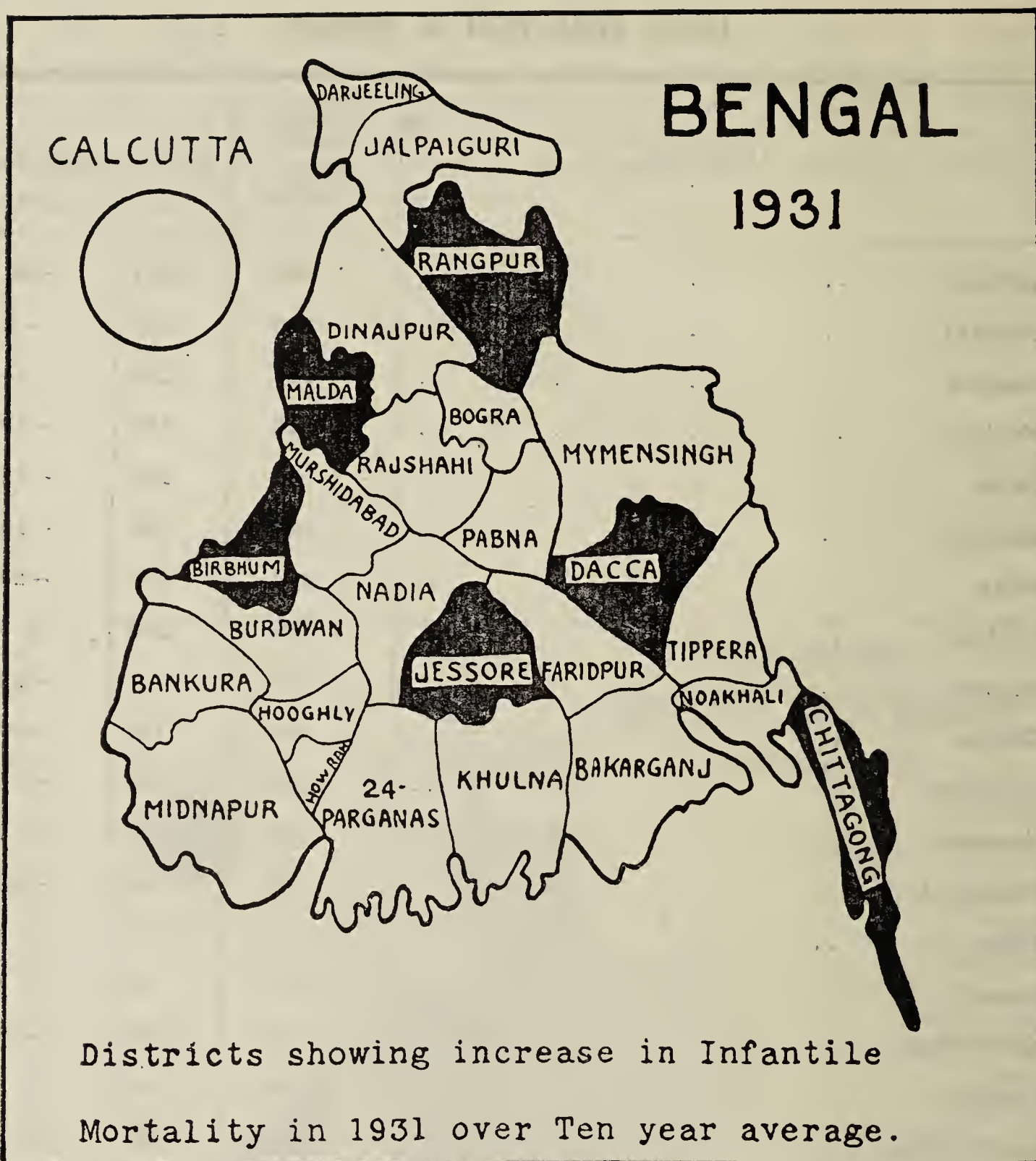


27. **Infant mortality in districts.**—During 1931, 14 districts returned death rates from infant mortality above the provincial average. The highest rate (244) was registered in Calcutta followed by Rangpur (237). The lowest was recorded from Tippera (121). Compared with the mean rate for the previous decennium, six districts showed an increase and 21 districts a decrease.



Infant death rates in districts.

Districts.					Average death rates, 1921-30.	1931.	Difference.
Calcutta	..	..	..	..	304	244	— 60
Rajshahi	..	..	..	..	226	220	— 6
Rangpur	..	..	..	..	218	237	+ 19
Dinajpur	..	..	..	..	218	163	— 55
Nadia	..	..	..	..	217	204	— 13
Burdwan	..	..	..	..	206	196	— 10
Bogra	..	..	..	..	205	185	— 20
Birbhum	..	..	..	..	203	206	+ 3
Howrah	..	..	..	..	199	170	— 29
Khulna	..	..	..	..	194	184	— 10
Jalpaiguri	..	..	..	..	192	156	— 36
Bankura	..	..	..	..	192	185	— 7
Bakarganj	..	..	..	..	192	143	— 49
Pabna	..	..	..	..	190	184	— 6
Hooghly	..	..	..	..	187	178	— 9
Mymensingh	..	..	..	..	184	160	— 24
Faridpur	..	..	..	..	183	178	— 5
Murshidabad	..	..	..	..	180	167	— 13
Jessore	..	..	..	..	173	187	+ 14
Midnapur	..	..	..	..	173	165	— 8
Dacca	..	..	..	..	172	198	+ 26
Darjeeling	..	..	..	..	170	122	— 48
24-Parganas	..	..	..	..	160	139	— 21
Malda	..	..	..	..	154	174	+ 20
Chittagong	..	..	..	..	147	154	+ 7
Noakhali	..	..	..	..	140	130	— 10
Tippera	..	..	..	..	133	121	— 12



From the following table showing the classification of infant mortality according to sex, it is noticed that the infant male death rate was higher than the infant female death rate in all the districts except in Pabna and Jessore, where the reverse was the case. Compared with the average of the previous decade, the infant death rate for males was increased in six districts and for the females in seven districts. In six of these districts the increase was noted in respect of both the sexes. In Bankura alone the infant female death rate was higher than the infant male death rate.

Infant mortality rates for each district per 1,000 births according to sex.

Districts.	Male death rates.			Female death rates.			Increase + or decrease — of male compared with female deaths, 1931.
	Average for the previous 10 years.	1931.	Increase + or decrease —.	Average for the previous 10 years.	1931.	Increase + or decrease —.	
Calcutta ..	312.1	257.8	—54.3	295.5	229.5	—66.0	+28.3
Rajshahi ..	229.6	225.2	—4.4	223.2	214.7	—8.5	+10.5
Rangpur ..	226.5	243.2	+16.7	209.3	230.5	+21.2	+12.7
Dinajpur ..	225.1	170.7	—54.4	210.6	155.6	—55.0	+15.1
Nadia ..	220.2	205.1	—15.1	214.1	202.1	—12.0	+3.0
Burdwan ..	215.8	203.5	—12.3	195.4	187.2	—8.2	+16.3
Bogra ..	209.2	190.9	—18.3	199.6	178.4	—21.2	+12.5
Birbhum ..	215.6	216.2	+0.6	190.4	195.3	+4.9	+20.9
Howrah ..	207.5	175.7	—31.8	190.1	163.0	—27.1	+12.7
Khulna ..	201.1	190.9	—10.2	186.6	177.0	—9.6	+13.9
Jalpaiguri ..	197.6	162.6	—35.0	186.6	149.8	—36.8	+12.8
Bankura ..	202.8	188.6	—14.2	180.4	181.1	+0.7	+7.5
Bakarganj ..	201.2	150.9	—50.3	181.6	134.6	—47.0	+16.3
Pabna ..	190.1	182.5	—7.6	190.2	186.3	—3.9	—3.8
Hooghly ..	193.0	186.5	—6.5	180.7	169.3	—11.4	+17.2
Mymensingh ..	190.2	166.3	—23.9	177.7	154.2	—23.5	+12.1
Faridpur ..	187.8	186.9	—0.9	177.9	168.6	—9.3	+18.3
Murshidabad ..	187.1	174.7	—12.4	172.2	158.8	—13.4	+15.9
Jessore ..	172.7	185.2	+12.5	174.3	188.8	+14.5	—3.6
Midnapur ..	175.3	167.8	—7.5	170.3	162.8	—7.5	+5.0
Dacca ..	177.3	203.3	+26.0	166.2	192.3	+26.1	+11.0
Darjeeling ..	175.8	133.6	—42.2	164.5	109.7	—54.8	+23.9
24-Parganas ..	163.9	146.7	—17.2	154.8	130.8	—24.0	+15.9
Malda ..	155.5	176.5	+21.0	152.7	171.6	+18.9	+4.9
Chittagong ..	148.8	159.8	+11.0	145.2	158.9	+13.7	+0.9
Noakhali ..	141.7	133.6	—8.1	138.2	126.1	—12.1	+7.5
Tippera ..	140.7	127.3	—13.4	124.4	113.3	—11.1	+14.0

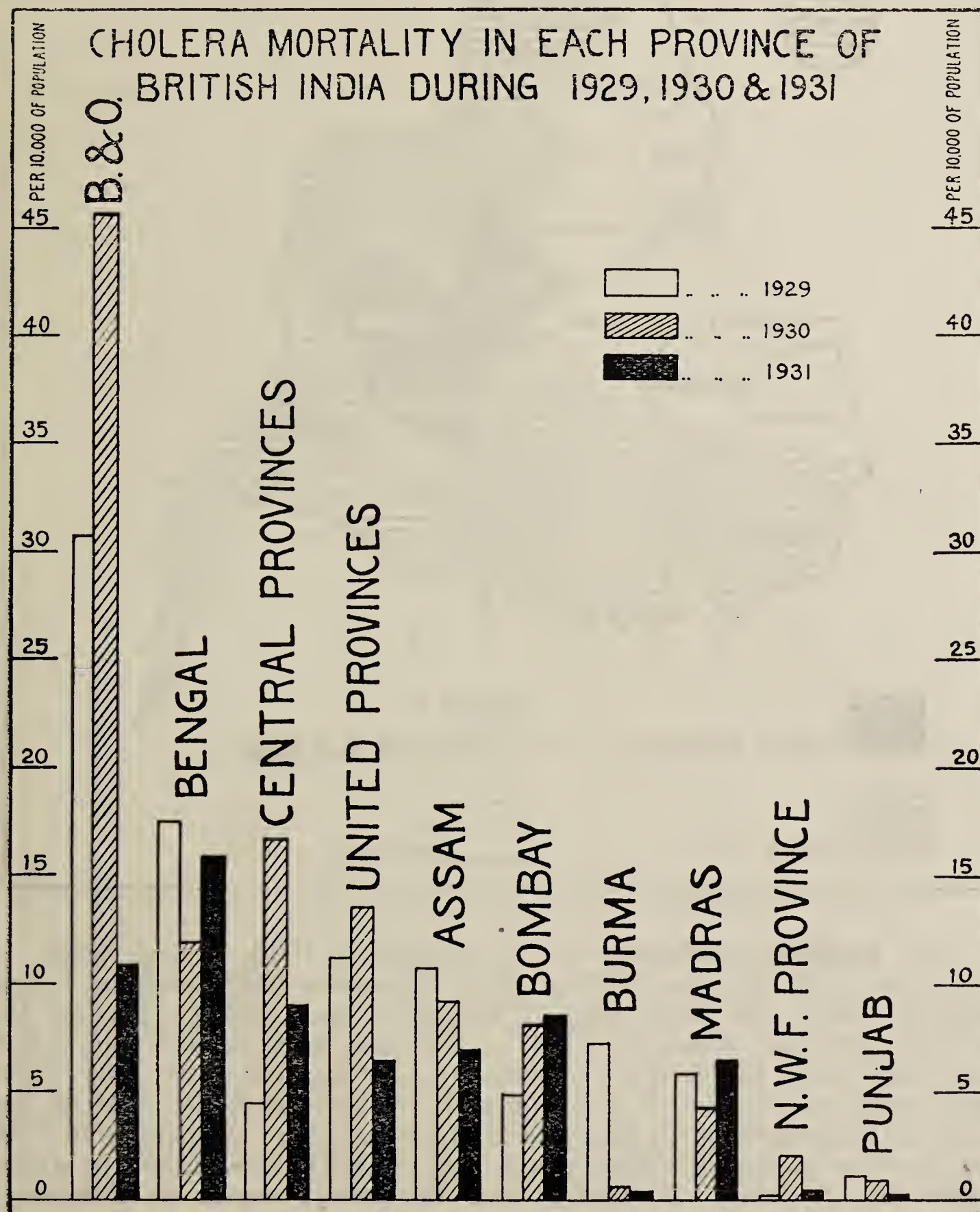
28. **Infant mortality in towns and rural areas.**—13,650 infants under one year died in towns in 1931, yielding a death rate of 187.0 against 12,803 with a death rate of 202.4 per 1,000 births in 1930, showing a decrease of 7.6 per cent. over the latter. The highest rate 395.5 was returned from Kalna Municipality followed by 280.5 from Sonamukhi Municipality. The lowest figure (16.9) was returned from Sherpur Municipality in the district of Bogra. The rural rate was 173.3 against 186.5 in the previous year, showing a decrease of 7.1 per cent. in 1931. The rural rate was 7.3 per cent. lower than the urban one.

Chapter III.

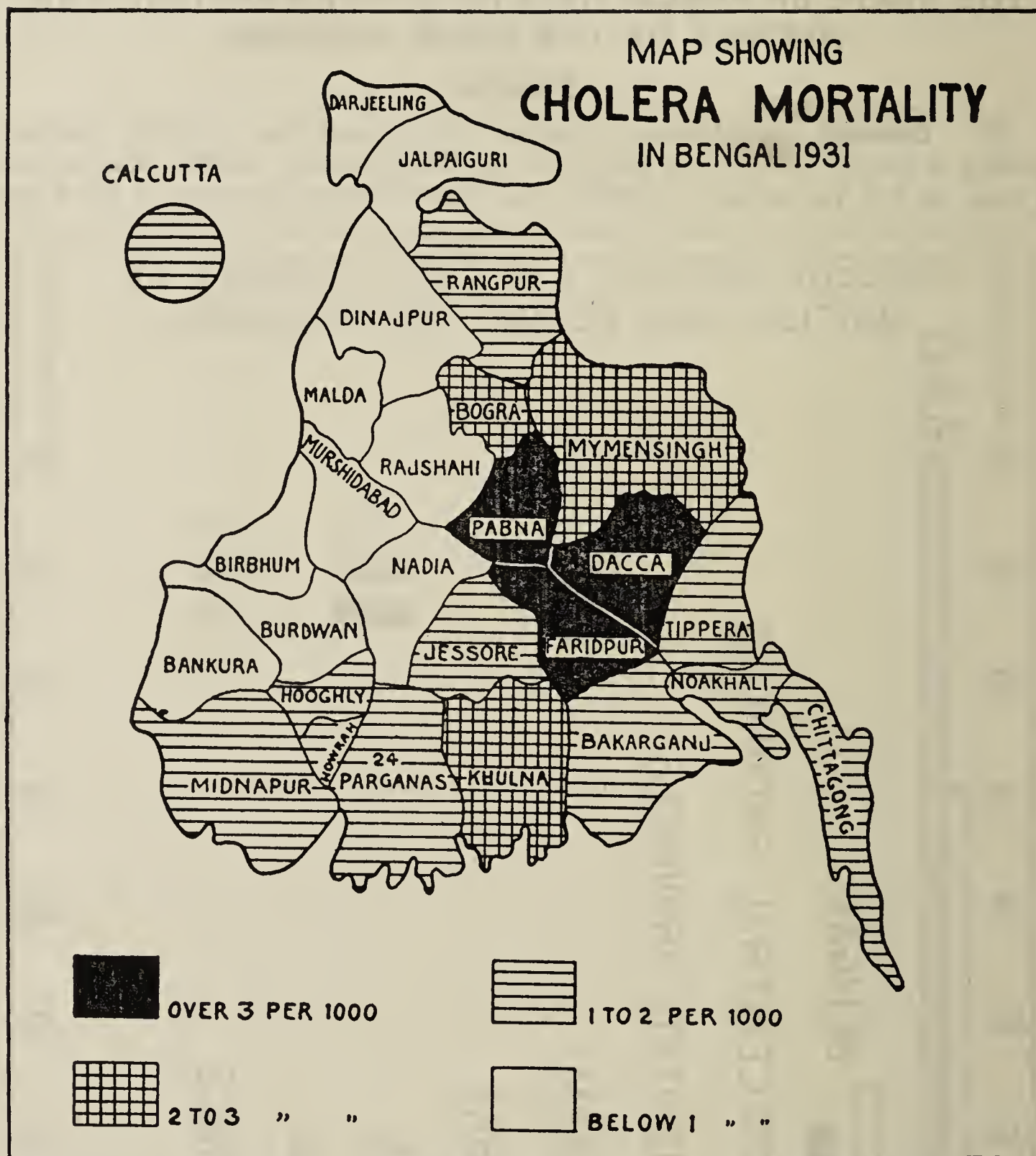
THE STATE OF PUBLIC HEALTH IN THE PROVINCE AND HISTORY OF THE CHIEF DISEASES.

Cholera.

29. **General prevalence.**—Cholera accounted for 79,073 deaths, giving a death rate of 1·6 per mille in 1931 against 54,963 deaths and a rate of 1·2 per mille in 1930, thus showing an increase of 33·3 per



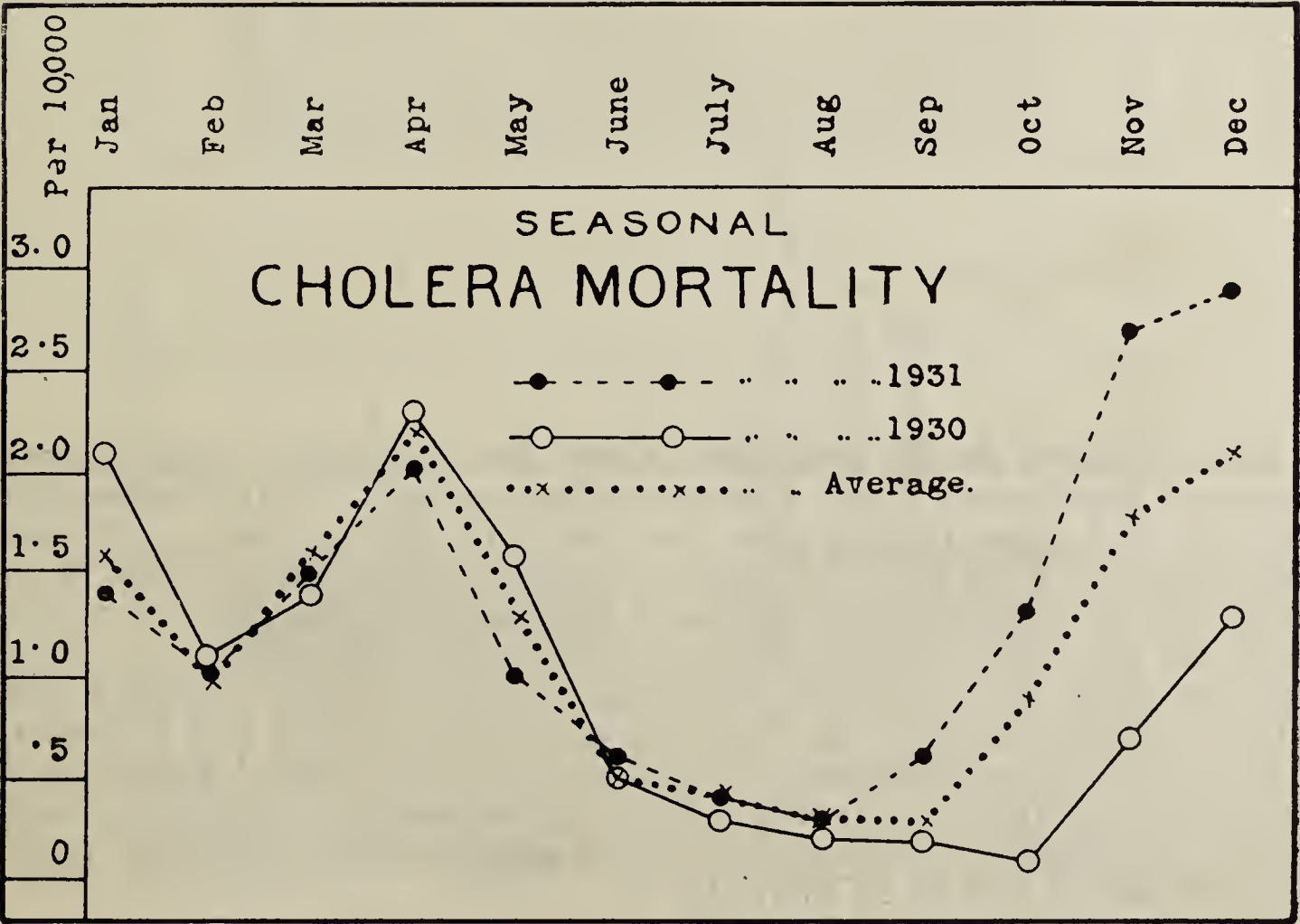
cent. It was 11.1 per cent. less than the average of the previous quinquennium (1.8). 7.1 per cent. of the total deaths in the province in 1931 were due to cholera. Deaths from cholera were reported from 605 out of 654 circles of registration and from 14,952 out of 86,360 villages in the province against 617 out of the 654 circles and 13,183 out of the 84,748 respectively in the previous year.



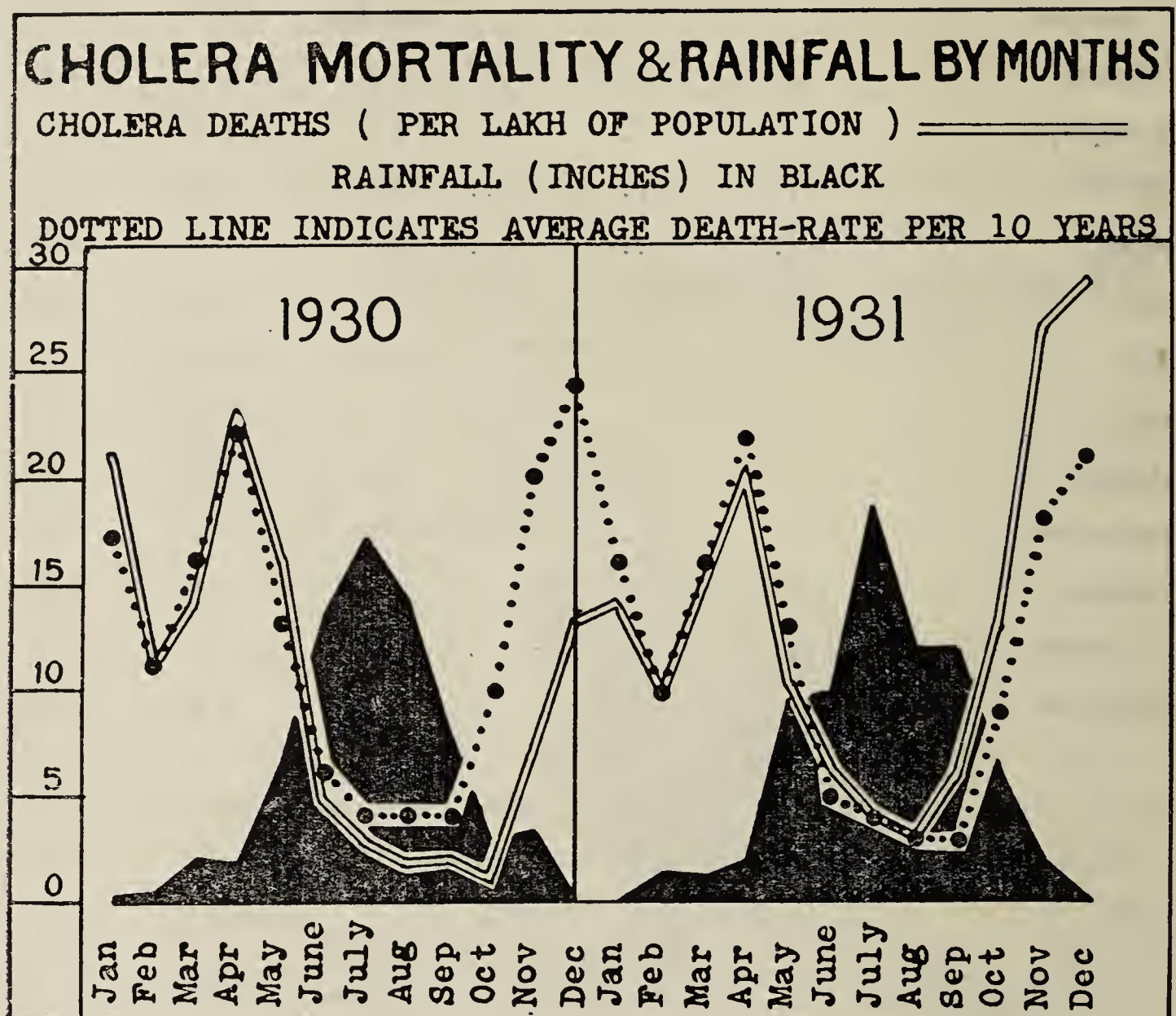
30. **Seasonal incidence.**—(a) In November 1930, cholera began to rise from .1 in October 1930 to .7 in November 1930 reaching 1.4 in January 1931. In April 1931 it reached 2 per 10,000. During the rainy season, i.e., from June 1931, death rate from cholera declined to rise once more in October, November and December of 1931. The death rate was higher in every month during the latter half of the year 1931 compared with that of the previous year. As compared with the previous decennium this death rate in 1931 was higher in June, September, October, November and December, equal in February, July and August and less in the remaining months.

Seasonal Cholera Mortality (per 10,000 of population).

Months.					Average, 1921-30.	1930.	1931.
January	..	..	..	..	1.6	2.1	1.4
February	..	..	..	..	1.0	1.1	1.0
March	..	..	..	..	1.6	1.4	1.5
April	..	..	..	..	2.2	2.3	2.0
May	..	..	..	..	1.3	1.6	1.0
June	..	..	..	..	.5	.5	.6
July	..	..	..	..	.4	.3	.4
August	..	..	..	..	.3	.2	.3
September	..	..	..	..	.3	.2	.6
October	..	..	..	..	.9	.1	1.3
November	..	..	..	..	1.8	.7	2.7
December	..	..	..	..	2.1	1.3	2.9



(b) The diagram below shows the relationship between cholera deaths and rainfall in Bengal:—

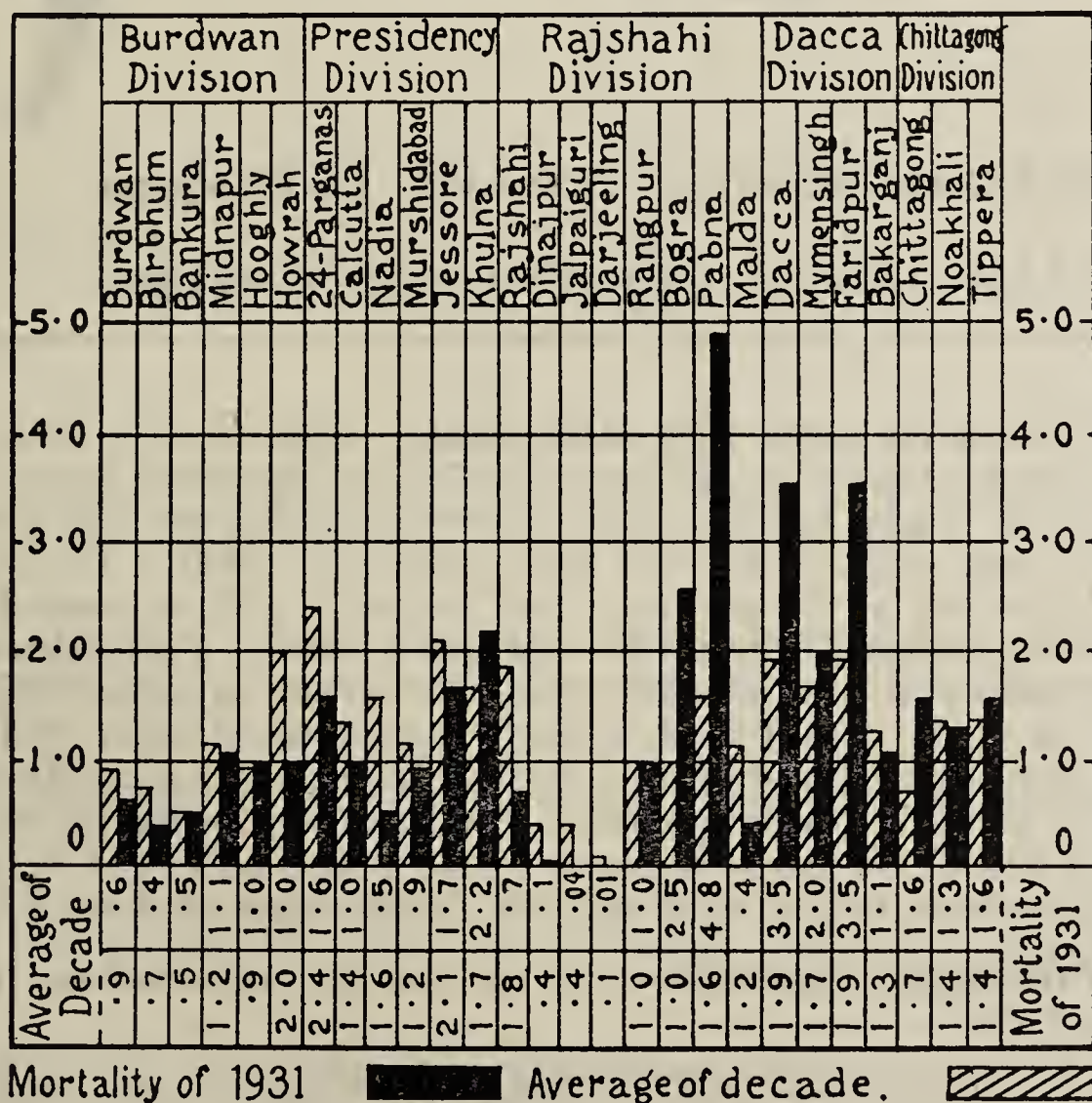


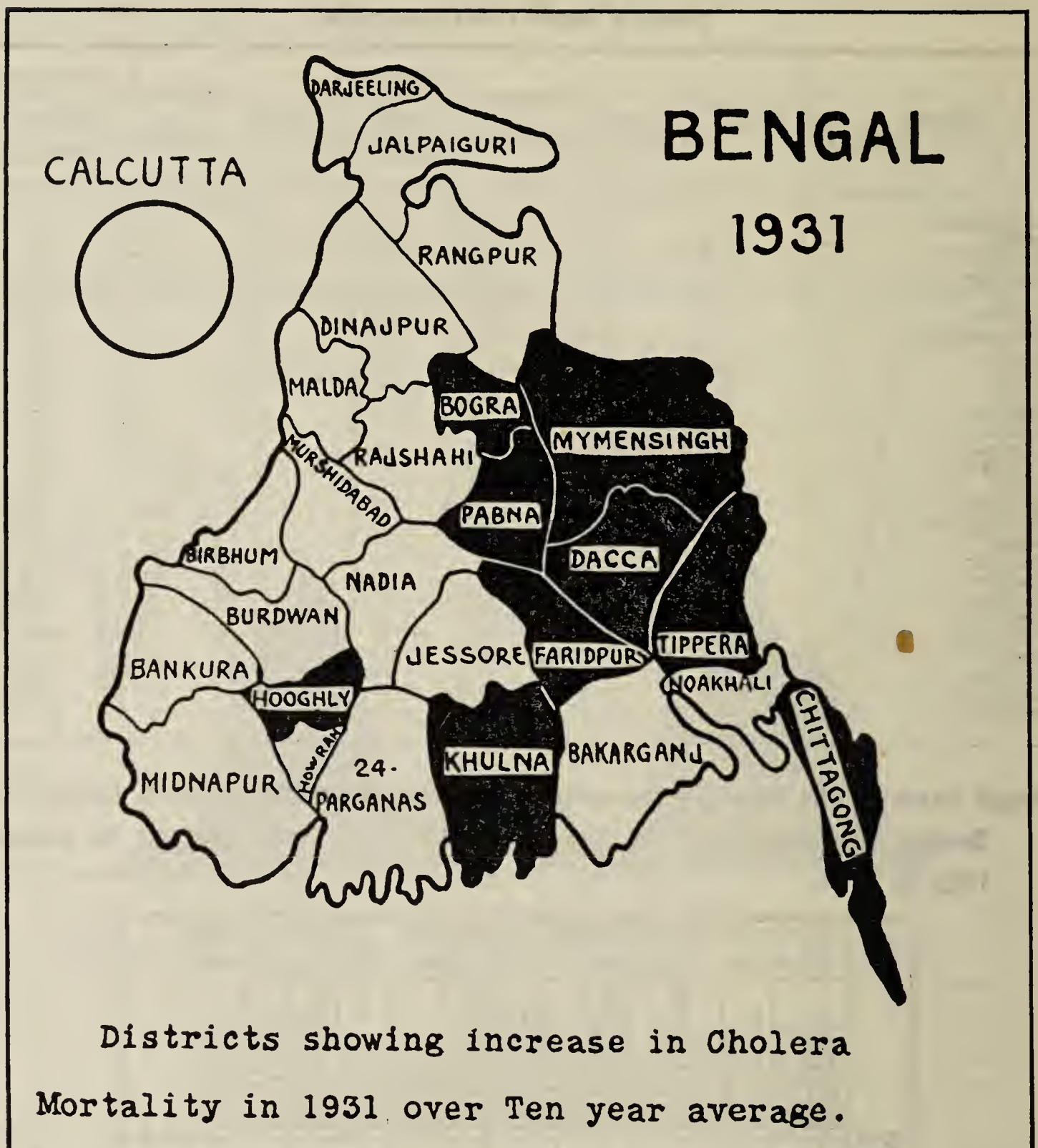
31. **Cholera deaths and death rates in districts.**—Seven districts returned death rates above the provincial average (1.6). Pabna with its rate of 4.8 per mille topped the list, followed by Dacca (3.5) and Faridpur (3.5). Three districts returned rates between 2 and 3 per mille and 11 districts between 1 and 2 per mille. Ten districts returned death rates from cholera below 1 per mille. The lowest rate being .01 per mille was returned from Darjeeling. When compared with 1930 we find an increase in the death rates from cholera in 14 districts. The death rate was stationary in two districts and showed a decrease in 11 districts. When compared with the previous decennium the death rates from cholera showed an increase in nine districts, stationary in two districts and a fall in 16 districts.

Cholera death rates per mille.

Districts.	Decennial average.	1931.	Increase + or decrease —.	Percentage of increase + or decrease —.	1930.	Increase + or decrease —.	Percentage of increase + or decrease —.
24-Parganas	2.4	1.6	-0.8	-33.3	1.9	-0.3	-15.8
Jessore	2.1	1.7	-0.4	-19.1	1.2	+0.5	+41.6
Howrah	2.0	1.0	-1.0	-50.0	2.0	-1.0	-50.0
Faridpur	1.9	3.5	+1.6	+84.2	2.3	+1.2	+52.1
Dacca	1.9	3.5	+1.6	+84.2	2.1	+1.4	+66.6
Rajshahi	1.8	0.7	-1.1	-61.1	0.4	+0.3	+75.0
Mymensingh	1.7	2.0	+0.3	+17.6	1.0	+1.0	+100.0
Khulna	1.7	2.2	+0.5	+29.4	1.0	+1.2	+120.0
Nadia	1.6	0.5	-1.1	-68.8	1.8	-1.3	-72.2
Pabna	1.6	4.8	+3.2	+200.0	1.1	+3.7	+336.3
Calcutta	1.4	1.0	-0.4	-28.6	1.6	-0.6	-37.5
Noakhali	1.4	1.3	-0.1	-7.2	0.9	+0.4	+44.4
Tippera	1.4	1.6	+0.2	+14.3	1.4	+0.2	+14.3
Bakarganj	1.3	1.1	-0.2	-15.4	1.0	+0.1	+10.0
Malda	1.2	0.4	-0.8	-66.7	1.3	-0.9	-69.2
Midnapur	1.2	1.1	-0.1	-8.4	1.1	±0	±0
Murshidabad	1.2	0.9	-0.3	-25.0	1.2	-0.3	-25.0
Bogra	1.0	2.5	+1.5	+150.0	0.3	+2.2	+733.2
Rangpur	1.0	1.0	±0	±0	0.9	+0.1	+11.1
Hooghly	0.9	1.0	+0.1	+11.1	0.9	+0.1	+11.1
Burdwan	0.9	0.6	-0.3	-33.3	0.9	-0.3	-33.3
Birbhum	0.7	0.4	-0.3	-42.9	0.7	-0.3	-42.9
Chittagong	0.7	1.6	+0.9	+128.5	0.4	+1.2	+300.0
Bankura	0.5	0.5	±0	±0	0.5	±0	±0
Dinajpur	0.5	0.1	-0.4	-80.0	0.6	-0.5	-83.3
Jalpaiguri	0.4	0.04	-0.36	-90.0	0.1	-0.06	-60.0
Darjeeling	0.1	0.01	-0.09	-90.0	0.04	-0.03	-75.0

Graph showing the Relative Intensity of Cholera Mortality in each district of Bengal Presidency during the year 1931 and the average of decade 1921 to 1930.





32. **Cholera in towns and rural areas.**—3,333 deaths from cholera occurred in the towns in 1931 and 75,740 in the rural areas yielding death rates of .9 and 1.6 per mille, respectively, for each of these areas against 1.2 per mille in each of those areas for 1930. The town rate was therefore less by 25 per cent. and the rural rate increased by 33.3 per cent. as compared with the previous year. Forty-three towns returned death rates for cholera above the urban average which is .9. The highest death rate 3.9 per mille was registered from Baduria and Satkhira Municipalities, followed by 3.4 in Narayanganj Municipality and 3.1 in Serajganj Municipality. Seven other towns recorded rates between 2 and 3, 32 towns between 1 and 2 and 58 towns below 1 per mille. Seventeen towns reported “no death from cholera.”

33. **Preventive measures.**—The following anti-cholera measures were adopted:—

(a) *Inoculation.*—2,395,405 cubic centimetres of anti-cholera vaccine were issued in 1931 against 1,184,415 cubic centimetres in the

previous year. The total number of inoculations performed was 1,832,817 against 1,021,541 in 1930. The subjoined table shows the number of inoculations performed in the various districts and the cholera deaths for the year under review and the previous year:—

Cholera inoculations and deaths.

Districts.	Inoculations reported.		Cholera deaths.	
	1930.	1931.	1930.	1931.
Burdwan	15,145	73,613	1,360	963
Birbhum	13,861	12,106	600	368
Bankura	8,843	12,495	570	556
Midnapur	106,216	162,246	2,864	3,064
Hooghly	19,773	10,886	997	1,077
Howrah	21,539	14,725	2,014	1,091
24-Parganas	59,007	88,185	4,736	4,359
Calcutta .. ..	..	..	1,755	1,235
Nadia	22,863	32,111	2,638	759
Murshidabad	31,684	33,911	1,516	1,201
Jessore	24,857	69,035	2,089	2,787
Khulna	21,896	68,528	1,377	3,515
Rajshahi	9,001	23,189	648	1,017
Dinajpur	23,282	9,344	1,079	143
Jalpaiguri	3,642	5,309	134	44
Darjeeling	70	..	11	3
Rangpur	48,897	80,670	2,324	2,563
Bogra	15,926	99,333	328	2,736
Pabna	23,569	149,341	1,491	6,935
Malda	16,970	19,457	1,258	451
Dacca	75,833	117,541	6,524	12,093
Mymensingh	112,148	192,693	4,720	10,370
Faridpur	82,886	132,821	5,251	8,257
Bakarganj	89,529	133,787	2,713	3,353
Chittagong	29,514	91,255	710	2,865
Chittagong Hill Tracts	1,381	319	..	..
Tippera	68,915	159,932	3,986	5,116
Noakhali	67,144	120,085	1,270	2,152
Miscellaneous .. ..	..	3,795	..	..
Total	1,021,541	1,832,817	54,963	79,073

(b) *Disinfection of water-supplies, etc.*—180,753 wells and 36,509 tanks were disinfected in addition to 1,876 river ghats, 14,835 houses, 3,695 *dobas* and 917 latrines.

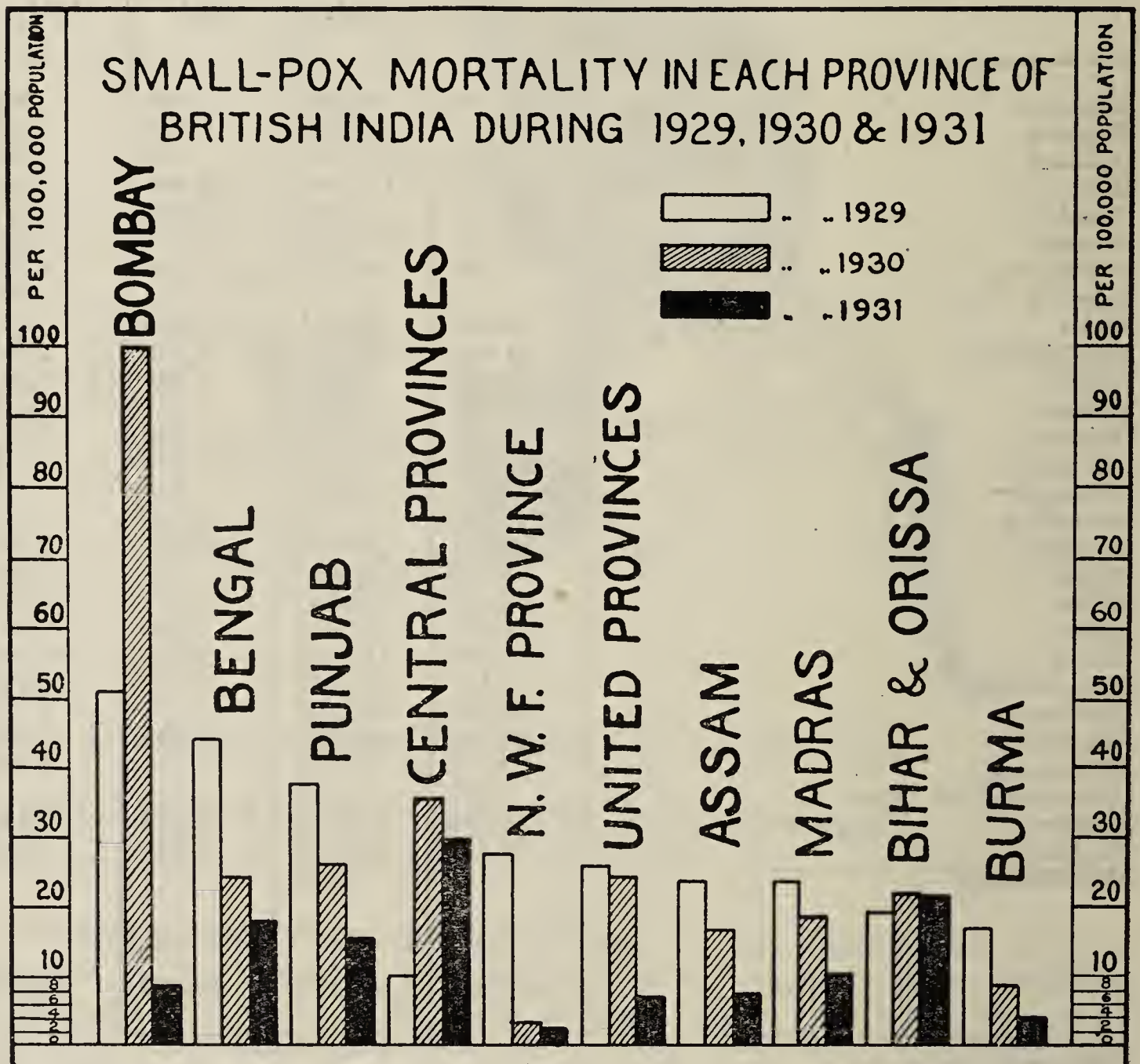
(c) Inoculation of pilgrims to the Puri Rathjatra and Ganga Sagar melas and the Haj.

(d) Help was given by the medical staff under the Bengal Public Health Department to the local bodies whenever possible and practicable.

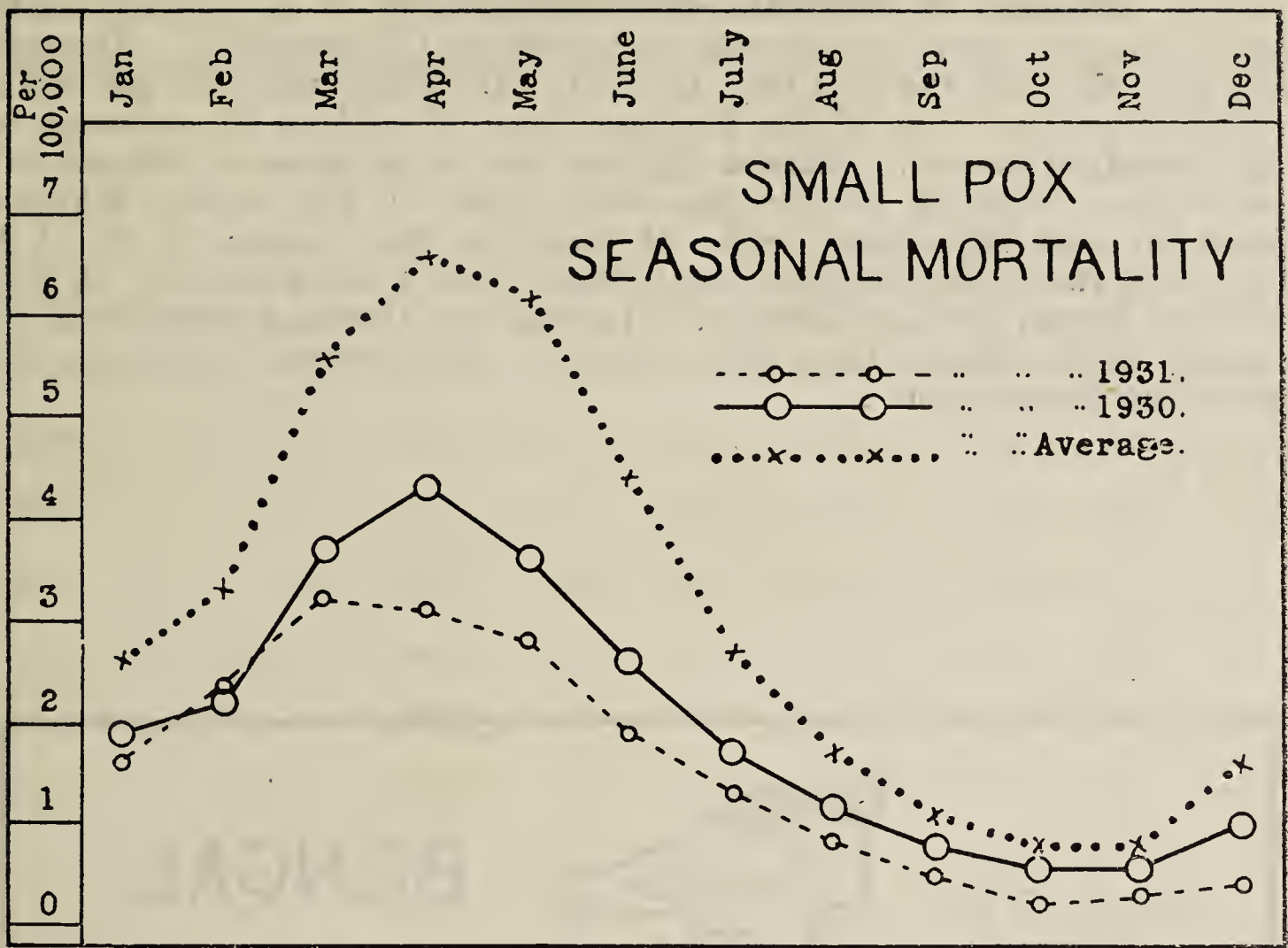
(e) Lantern lectures and magic lantern demonstrations together with the distribution of leaflets and posters.

Smallpox.

34. **General prevalence.**—Smallpox claimed 9,207 victims in the province in 1931 against 11,268 in 1930. The death rate was .2 per mille in 1931 being the same as in 1930, and .6 the mean of the previous five years, showing a reduction of 66.7 per cent. against the latter, being stationary in the former. Smallpox was responsible for 0.8 per cent. of the total provincial mortality against 1.1 per cent. in 1930. 2,332 villages out of 86,360 were affected with smallpox in 1931 compared with 4,565 in 1930.



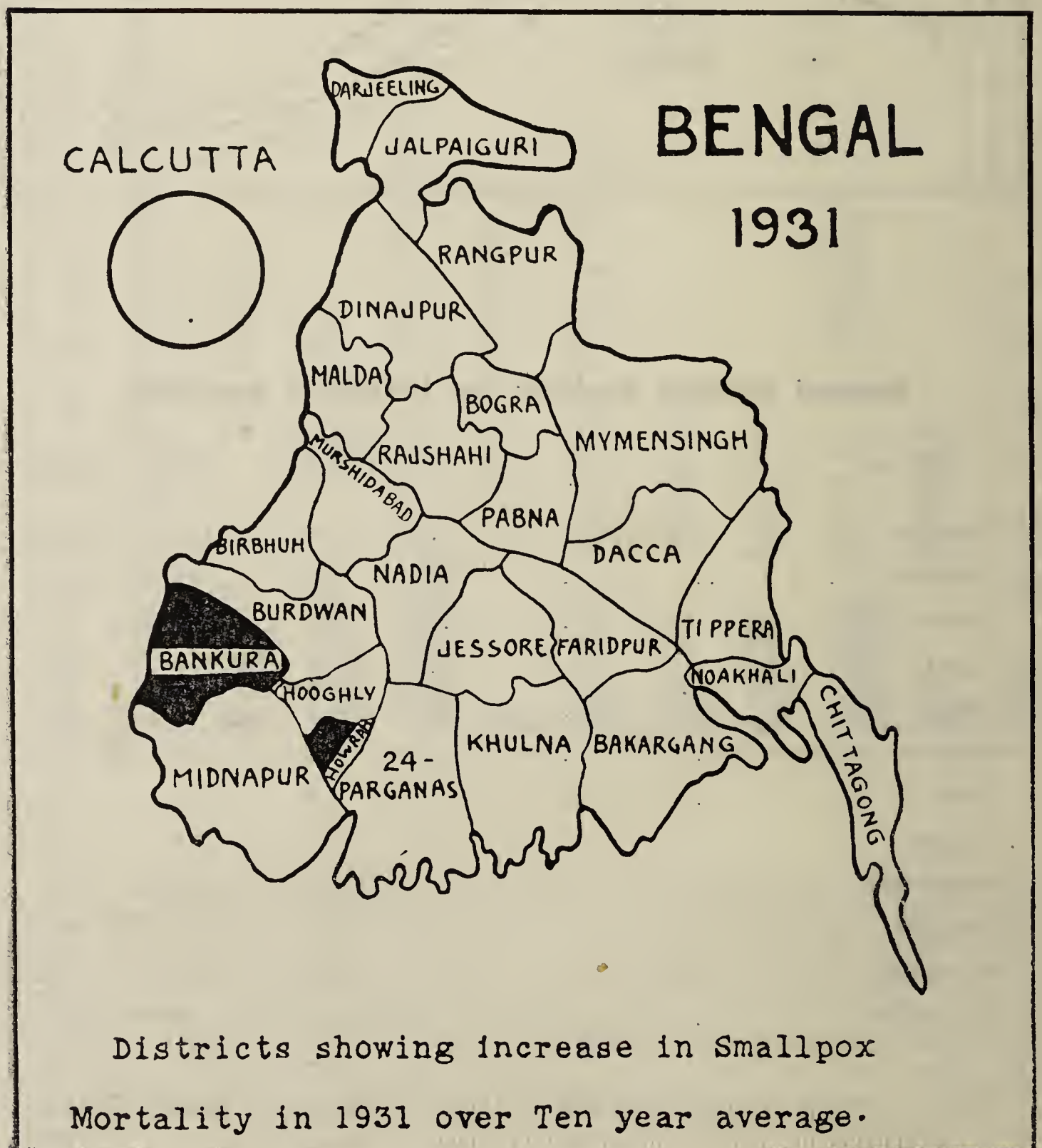
35. **Seasonal incidence.**—Starting from December 1930 the cases began to increase till the maximum was reached in March 1931, when the descent began, resulting in a period of comparative quiescence during August to December 1931. The highest mortality rate 3.2 per 100,000 was obtained in March 1931 and the lowest in October (.2 per 100,000). Compared with that for 1930 and the average of the previous decade the death rate was less in every month of the year 1931 (except during February when it was 2.3 against 2.2 per 100,000 in 1930).



Seasonal smallpox mortality per 100,000 of population.

Months.					Average, 1921-30.	1930.	1931.
January	..	..	..	..	2.6	1.9	1.6
February	..	..	..	..	3.3	2.2	2.3
March	..	..	..	..	5.6	3.7	3.2
April	..	..	..	..	6.6	4.3	3.1
May	..	..	..	..	6.2	3.6	2.8
June	..	..	..	..	4.4	2.6	1.9
July	..	..	..	..	2.7	1.7	1.3
August	..	..	..	..	1.7	1.2	0.8
September	..	..	..	..	1.1	0.8	0.5
October	..	..	..	..	0.8	0.6	0.2
November	..	..	..	..	0.8	0.6	0.3
December	..	..	..	..	1.6	1.0	0.4
Total					37.4	24.2	18.4

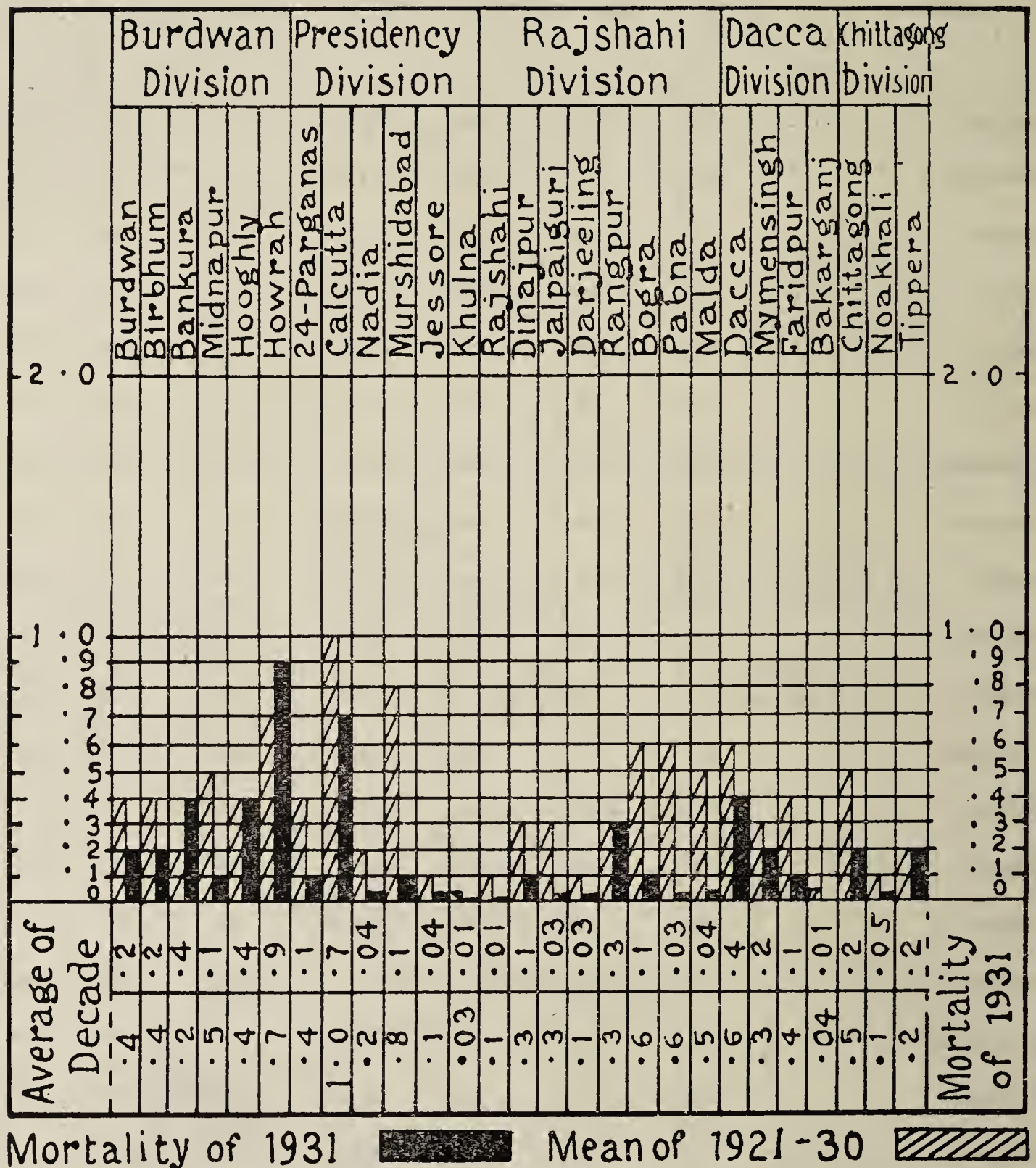
36. **Smallpox in districts.**—Ten districts out of 27 yielded death rates above the provincial average for smallpox ($\cdot 2$ per mille). Howrah had the worst of the smallpox in 1931. Its death rate $\cdot 91$ per mille was higher than that of the previous year as well as the average of the preceding decade. Fifteen districts had rates between $1\cdot 0$ and $0\cdot 1$ per mille, while in 12 the rate was below $\cdot 1$ per mille. Khulna, Rajshahi and Bakarganj with $\cdot 01$ stood at the bottom of the list. Compared with the previous year there was a reduction in all the districts except in nine districts. Howrah and Bankura districts alone showed higher death rates than those in the previous year and the preceding decennium.



Smallpox death rates per mille.

Districts.	Average of decade, 1921-30.	1931.	Increase + or decrease —.	Percent- age of increase + or decrease —.	1930.	Increase + or decrease —.	Percent- age of increase + or decrease —.
Calcutta ..	·96	·74	— ·22	— 22 ·9	1 ·69	— ·95	— 56 ·2
Murshidabad ..	·82	·11	— ·71	— 86 ·6	·17	— ·06	— 35 ·3
Howrah ..	·71	·91	+ ·20	+ 28 ·1	·60	+ ·31	+ 51 ·6
Pabna ..	·64	·03	— ·61	— 95 ·3	·05	— ·02	— 40 ·0
Bogra ..	·63	·06	— ·57	— 90 ·5	·04	+ ·02	+ 50 ·0
Dacca ..	·61	·38	— ·23	— 37 ·7	·73	— ·35	— 48 ·0
Chittagong ..	·53	·24	— ·29	— 54 ·7	·18	+ ·06	+ 33 ·3
Midnapur ..	·52	·08	— ·44	— 84 ·6	·11	— ·03	— 27 ·3
Malda ..	·51	·04	— ·47	— 92 ·2	·03	+ ·01	+ 33 ·3
Burdwan ..	·44	·24	— ·20	— 45 ·5	·25	— ·01	— 4 ·0
Hooghly ..	·44	·44	±0	±0	·53	— ·09	— 17 ·0
24-Parganas ..	·42	·13	— ·29	— 69 ·1	·28	— ·15	— 53 ·6
Birbhum ..	·38	·20	— ·18	— 47 ·4	·19	+ ·01	+ 5 ·2
Faridpur ..	·36	·12	— ·24	— 66 ·7	·45	— ·33	— 73 ·3
Dinajpur ..	·33	·10	— ·23	— 69 ·7	·11	— ·01	— 9 ·1
Rangpur ..	·32	·32	±0	±0	·19	+ ·13	+ 68 ·4
Mymensingh ..	·30	·17	— ·13	— 43 ·3	·13	+ ·04	+ 30 ·8
Jalpaiguri ..	·29	·03	— ·26	— 89 ·7	·02	+ ·01	+ 50 ·0
Tippera ..	·24	·21	— ·03	— 12 ·5	·21	±0	±0
Nadia ..	·20	·04	— ·16	— 80 ·0	·09	— ·05	— 55 ·6
Bankura ..	·17	·41	+ ·24	+ 141 ·1	·23	+ ·18	+ 78 ·2
Rajshahi ..	·14	·01	— ·13	— 92 ·9	·01	±0	±0
Noakhali ..	·14	·05	— ·09	— 64 ·3	·09	— ·04	— 44 ·5
Jessore ..	·13	·04	— ·09	— 69 ·2	·08	— ·04	— 50 ·0
Darjeeling ..	·07	·03	— ·04	— 57 ·2	·04	— ·01	— 25 ·0
Bakarganj ..	·04	·01	— ·03	— 75 ·0	·05	— ·04	— 80 ·0
Khulna ..	·03	·01	— ·02	— 66 ·7	·03	— ·02	— 66 ·7

Graph showing the relative intensity of smallpox mortality in each district of Bengal Presidency during the year 1931 and the average of decade 1921-1930.



37. **Smallpox in towns and rural areas.**—2,080 deaths from smallpox were registered in the towns of Bengal in 1931 and 7,127 in the rural areas, against 3,150 and 8,118, respectively, in 1930. The respective death rates were .59 and .15 against 1.01 and .19 in 1930, showing a decrease of 41.6 and 21.1 per cent. in towns and in the rural areas, respectively. Eleven towns recorded death rates higher than the urban average, the chief of these being Bishnupur (6.0), Dum-Dum (4.9), Sonamukhi (3.7), Howrah (3.0) and Rishra-Konnagar (2.0). Thirty-seven towns recorded rates between 0.1 and 1 per mille. Nine towns recorded rates between 0.1 and 0.01 per mille. Sixty-seven towns reported no death from smallpox. Calcutta was responsible for 42.8 per cent. of the total deaths in all the other towns of Bengal. The table appended below shows in particular that so far as

urban areas are concerned Burdwan Division with an average of 47.1 deaths per town and with 83.2 per cent. of the total urban deaths from smallpox was the worst affected division in the province. Rajshahi, Dacca and Chittagong Divisions were practically free in 1931.

Smallpox.

Divisions.	Total number of towns.	Number of towns infected.	Number of deaths from smallpox.	Percentage of deaths.	Average deaths per town.
Burdwan	29	21	989	83.2	47.1
Presidency	48	22*	186	15.6	8.4
Rajshahi	15	2	3	.3	1.5
Dacca	20	4	5	.4	1.2
Chittagong	6	1	6	.5	6.0
Total	118	50	1,189	100	23.8

*Excluding Calcutta.

38. **Deaths from smallpox among infants below one year and children between one and ten years of age.**—382 infants below one year of age and 1,225 children between one and ten years of age died in 1931 from smallpox against 435 and 1,172, respectively, in 1930, showing a reduction of 53 in the former and an increase of 53 in the latter community. 4.1 per cent. of the total deaths occurred among the former and 13.3 per cent. among the latter in 1931, against 3.9 and 10.4 per cent. in 1930.

Deaths from smallpox among infants below one year and children between one and ten years of age.

Divisions.	Smallpox deaths.		Total smallpox deaths at all ages.
	Under one year.	Between 1 and 10 years.	
Burdwan	36	85	2,745
Presidency (including Calcutta)	29	85	1,539
Rajshahi	1	10	1,234
Dacca	258	855	2,519
Chittagong	58	190	1,170
Total	382	1,225	9,207

So far as the infants are concerned, the percentage of smallpox deaths to total increased in ten districts, the biggest rise being in

Tippera. Thirteen districts reported no death from smallpox among infants. Chittagong, which in 1930 showed 18·5 per cent. of the total smallpox deaths, recorded only 3·3 per cent. of total smallpox deaths in 1931. As regards children between one and ten years of age, twelve districts showed an increase in the percentage of deaths from smallpox in 1931. The maximum percentage of deaths from smallpox among the children between one and ten years of age is to be found in Dacca, followed by Jalpaiguri, Mymensingh and Darjeeling. Birbhum still showed a very high percentage of deaths among children from smallpox in 1931 as compared with the figure for 1930. Bogra, Rajshahi and Hooghly showed improvement so far as the deaths from smallpox among children between one and ten years of age were concerned during 1931.

Statement showing percentages of smallpox deaths among infants and children between one and ten years of age to total deaths from smallpox at all ages.

Districts.	Infants.		Children between 1 and 10 years of age.	
	1930.	1931.	1930.	1931.
Burdwan	1·1	1·3	·8	·3
Birbhum	4·8	7·9	9·1	24·2
Bankura .. ..	..	·2	..	·7
Midnapur	·3	·9	3·4	7·8
Hooghly	5·4	2·7	11·9	3·5
Howrah .. ..	..	..	..	..
24-Parganas .. ..	..	..	·3	..
Calcutta	1·1	3·0	5·2	6·8
Nadia .. ..	..	..	..	..
Murshidabad	8·1	·7	15·6	14·7
Jessore .. ..	..	1·6	..	3·2
Khulna .. ..	..	..	..	..
Rajshahi	4·3	..	13·0	..
Dinajpur	3·2	·5	6·9	1·6
Jalpaiguri .. ..	..	..	..	17·1
Darjeeling .. ..	..	..	..	10·0
Rangpur	1·4	..	5·3	..
Bogra	2·0	..	14·3	..
Pabna .. ..	..	..	..	..
Malda .. ..	..	..	..	..
Dacca	8·4	12·8	19·8	42·0
Mymensingh	4·9	7·4	12·3	25·0
Faridpur	5·8	8·7	25·9	29·7
Bakarganj .. ..	..	..	..	..
Chittagong	18·5	3·3	33·8	34·5
Noakhali .. ..	..	..	1·4	..
Tippera .. ..	..	6·7	·3	6·4

39. **Anti-smallpox measures.**—In addition to vaccination, which is dealt with fully in another chapter of this report, the usual measures of disinfection and propaganda by the Government staff and the local bodies were undertaken and actual help by the Bengal Public Health Department was given wherever necessary.

40. **Vaccinal condition of smallpox patients.**—The following statement shows the vaccinal condition of smallpox patients treated at the various medical institutions in Bengal during 1931:—

Districts.	Total number of admissions from smallpox.	Number vaccinated as shown by presence of one or more vaccinated cicatrices.	Number stated to have been successfully vaccinated but bearing no vaccination cicatrices.	Number stated to be unvaccinated or vaccinated unsuccessfully bearing no vaccination mark.	Number previously unvaccinated but vaccinated during incubation of smallpox.	Number stated to have been successfully revaccinated.	Type of smallpox.					Vaccination according to age.				
							Modified.	Discreet.	Confluent.	Semi-confluent.	Hæmorrhagic.	Under 1 year.	1 year and under 10.	10 years and under 20.	20 years and under 30.	Upwards.
Burdwan ..	18	11	..	..	4	3	8	6	2	..	2	..	..	4	8	6
Birbhum ..	4	2	..	2	..	..	3	1	..	..	..	1	2	..	1	..
Bankura ..	3	3	..	..	..	..	1	2	..	..	..	..	..	..	..	3
Midnapur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hooghly ..	3	2	..	1	..	..	1	..	1	..	1	..	..	..	1	2
Howrah ..	57	12	..	45	..	..	7	19	16	9	6	..	..	5	22	30
24-Parganas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Calcutta (Campbell Hospital) ..	380	218	14	106	5	37	143	98	81	31	27	6	22	91	141	120
Nadia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murshidabad ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jessore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Khulna ..	3	3	..	..	..	..	2	..	1	..	..	..	..	1	1	1
Rajshahi ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dinajpur ..	3	1	..	..	2	..	1	2	..	..	..	..	1	..	..	2
Jalpaiguri ..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Darjeeling ..	31	20	..	5	6	..	6	22	..	..	3	..	2	15	5	9
Rangpur ..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Bogra ..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..
Pabna ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malda ..	2	(Details not available.)					2	..	..	..	..	..	..	..	..	2
Dacca ..	15	9	3	3	..	..	4	4	7	..	..	..	2	2	4	7
Mymensingh ..	18	6	4	3	..	5	7	..	9	1	1	..	1	1	14	2
Faridpur ..	7	2	1	2	..	2	..	5	1	1	..	..	..	..	3	4
Bakarganj ..	3	2	..	1	..	..	2	..	1	..	..	..	1	..	1	1
Chittagong ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Noakhali ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tippera ..	16	..	9	6	..	1	10	6	..	..	..	..	..	..	5	11
Total ..	566	294	31	174	17	48	199	165	119	42	41	7	31	119	208	201

Plague.

41. Only one death from plague was reported from Calcutta in 1931.

Fevers.

42. **General prevalence.**—Deaths from fevers in 1931 amounted to 731,784 against 705,066 in 1930. The death rates were 14·7 for 1931, 15·1 for 1930 and 15·2 during the last quinquennium. The death rate in the year under review was thus reduced by 2·7 per cent. compared with the previous year and by 3·3 per cent. compared with the quinquennial average. There were slight increases under the following sub-heads (a) enteric fever and (b) relapsing fever. On the other hand there was a decrease under the following sub-heads (a) malaria fever, (b) kala-azar and (c) other fevers. The death rate from measles remained the same as in the previous year. Fevers accounted for 65·7 per cent. of the total provincial mortality against 67·5 per cent. in the previous year.

Analysis of fever deaths in 1930 and 1931.

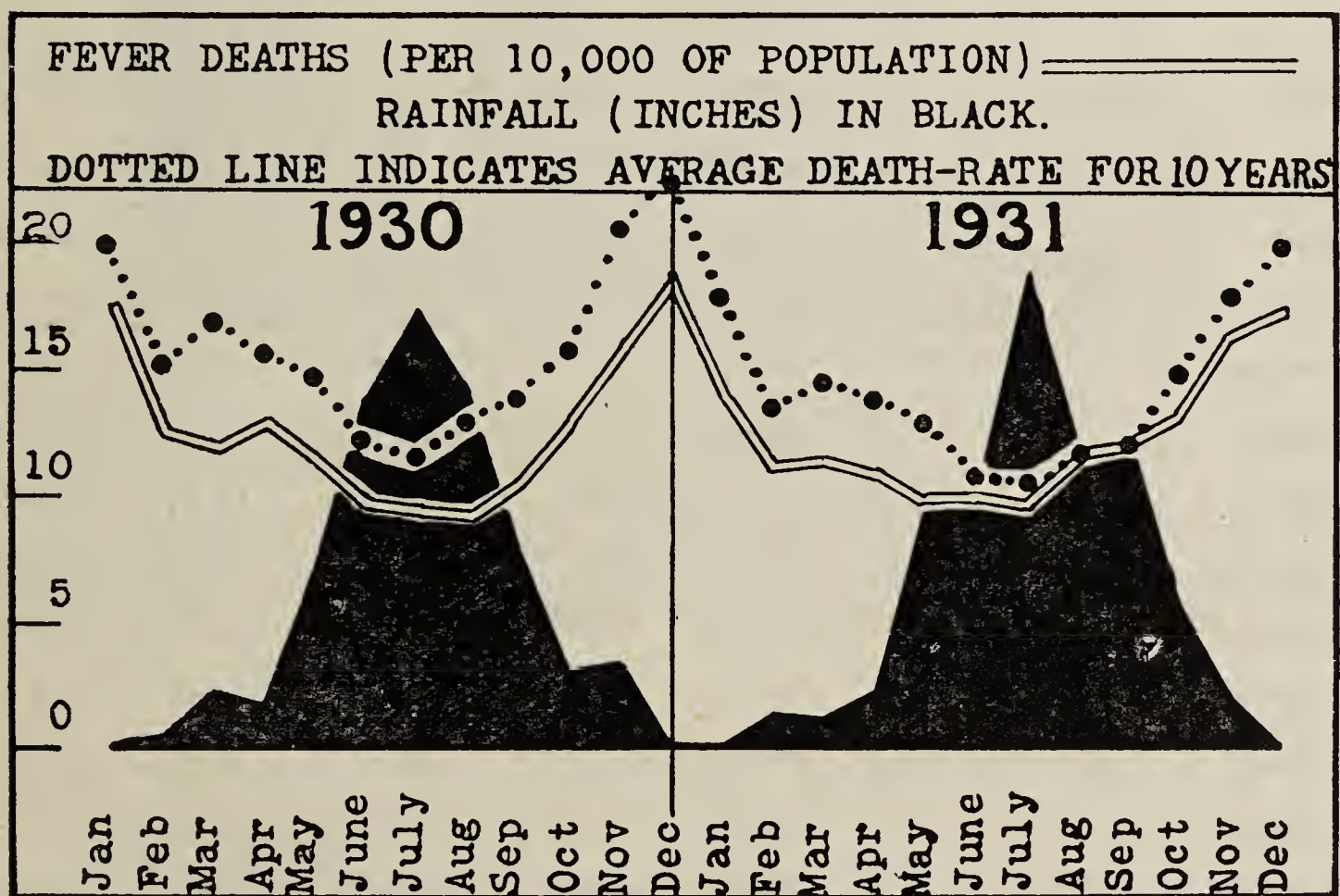
Causes.	Number.		Death rates per mille.		Percentage of increase + or decrease — in 1931.	Percentage of total fever mortality.	
	1930.	1931.	1930.	1931.		1930.	1931.
Malaria fever ..	336,879	349,111	7·2	7·0	—2·8	47·8	47·7
Enteric fever ..	11,144	12,608	0·24	0·25	+4·2	1·6	1·7
Relapsing fever ..	4,767	5,705	0·10	0·11	+10·0	0·7	0·8
Measles ..	2,963	2,954	0·06	0·06	±0	0·4	0·4
Kala-azar ..	10,914	10,199	0·23	0·20	—13·0	1·5	1·4
Other fevers ..	338,399	351,207	7·3	7·0	—4·1	48·0	48·0

43. **Seasonal incidence.**—Starting on its ascent from October 1930 it came down in February 1931, reaching its minimum in May, June and July of 1931. It started to rise again in August 1931. The maximum mortality of the year 1931 was registered in December and the minimum in July. Compared with the previous year the cases showed a decrease in the first half and an increase in the latter half of the year, except in March and December, respectively.

Fever deaths.

Months.				Average, 1921-30.	1930.	1931.	Percenta- ges of difference between 1930 and 1931.
January	..	..	..	89,261	80,266	68,966	-14.1
February	..	..	..	66,642	57,993	54,815	-5.5
March	..	..	..	72,030	54,371	56,417	+3.7
April	..	..	..	68,236	59,265	53,675	-9.4
May	..	..	..	64,320	52,654	48,819	-7.3
June	..	..	..	54,086	44,839	49,490	+10.4
July	..	..	..	52,221	43,730	48,356	+10.6
August	..	..	..	55,787	42,444	57,605	+35.7
September	..	..	..	59,411	48,717	60,416	+24.0
October	..	..	..	74,439	60,461	65,178	+7.8
November	..	..	..	88,667	73,723	82,054	+11.3
December	..	..	..	98,345	86,603	85,993	-0.7

The following graph shows the relationship between fevers and the rainfall in the year 1931:—



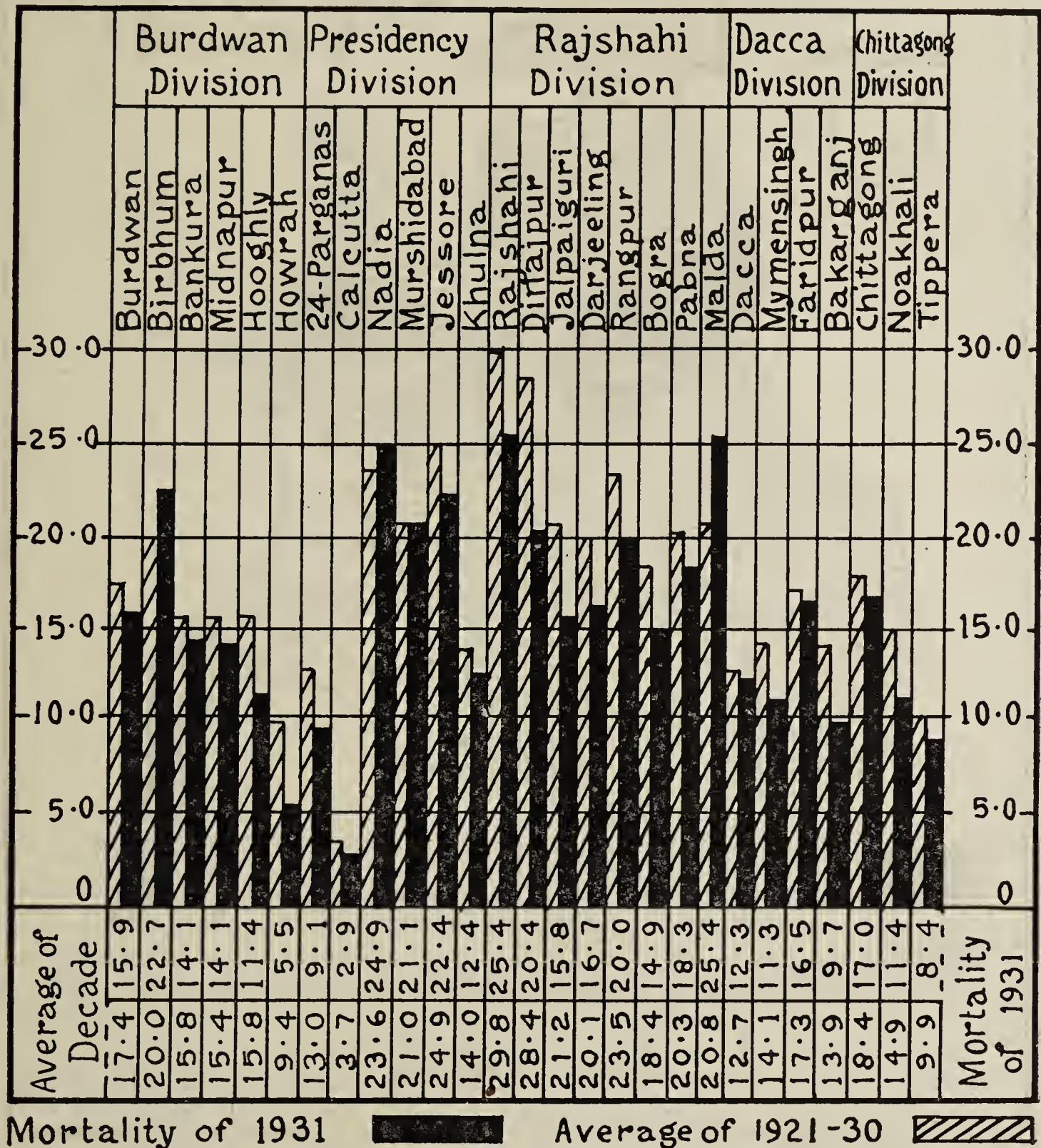
44. **Fever mortality in districts.**—Fifteen districts registered rates above the provincial average which is 14.7 per mille. Eight districts headed by Rajshahi and Malda (25.4 per mille for each) returned rates between 20 and 30 per mille, fourteen districts between 10 and 20, and the remaining five returned rates below ten—Bakarganj 9.7, 24-Parganas 9.1, Tippera 8.4, Howrah 5.5, and Calcutta 2.9.

Compared with the previous decade four districts, Nadia, Murshidabad, Malda and Birbhum, showed higher rates. Against 1930 the death rate was increased in eight districts, reduced in 17 districts and was stationary in two districts (Jalpaiguri and Faridpur).

Fever death rates per mille.

Districts.			Average of 1921-30.	1931.	Increase + or decrease—.	1930.	Increase + or decrease—.
Rajshahi	..	..	29·8	25·4	—4·4	25·9	—0·5
Dinaipur	..	..	28·4	20·4	—8·0	24·8	—4·4
Jessore	..	..	24·9	22·4	—2·5	21·9	+0·5
Nadia	..	..	23·6	24·9	+1·3	25·3	—0·4
Rangpur	..	..	23·5	20·0	—3·5	18·1	+1·9
Jalpaiguri	..	..	21·2	15·8	—5·4	15·8	±0
Murshidabad	..	..	21·0	21·1	+0·1	24·1	—3·0
Malda	..	..	20·8	25·4	+4·6	27·5	—2·1
Pabna	..	..	20·3	18·3	—2·0	21·0	—2·7
Darjeeling	..	..	20·1	16·7	—3·4	19·4	—2·7
Birbhum	..	..	20·0	22·7	+2·7	21·4	+1·3
Chittagong	..	..	18·5	17·0	—1·5	17·3	—0·3
Bogra	..	..	18·4	14·9	—3·5	15·0	—0·1
Burdwan	..	..	17·4	15·9	—1·5	16·3	—0·4
Faridpur	..	..	17·3	16·5	—0·8	16·5	±0
Hooghly	..	..	15·8	11·4	—4·4	11·3	+0·1
Bankura	..	..	15·8	14·1	—1·7	15·9	—1·8
Midnapur	..	..	15·4	14·1	—1·3	12·2	+1·9
Noakhali	..	..	14·9	11·4	—3·5	12·7	—1·3
Mymensingh	..	..	14·1	11·3	—2·8	11·0	+0·3
Khulna	..	..	14·0	12·4	—1·6	12·0	+0·4
Bakarganj	..	..	13·9	9·7	—4·2	10·5	—0·8
24-Parganas	..	..	13·0	9·1	—3·9	9·5	—0·4
Dacca	..	..	12·7	12·3	—0·4	11·8	+0·5
Tippera	..	..	9·9	8·4	—1·5	9·3	—0·9
Howrah	..	..	9·5	5·5	—4·0	6·7	—1·2
Calcutta	..	..	3·7	2·9	—0·8	3·2	—0·3

Graph showing the relative intensity of fever mortality in each district of Bengal Presidency during the year 1931 and the average of decade 1921-30.



MAP SHOWING FEVER MORTALITY IN BENGAL 1931

CALCUTTA



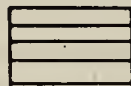
OVER 25 PER 1000



15 TO 20 PER 1000



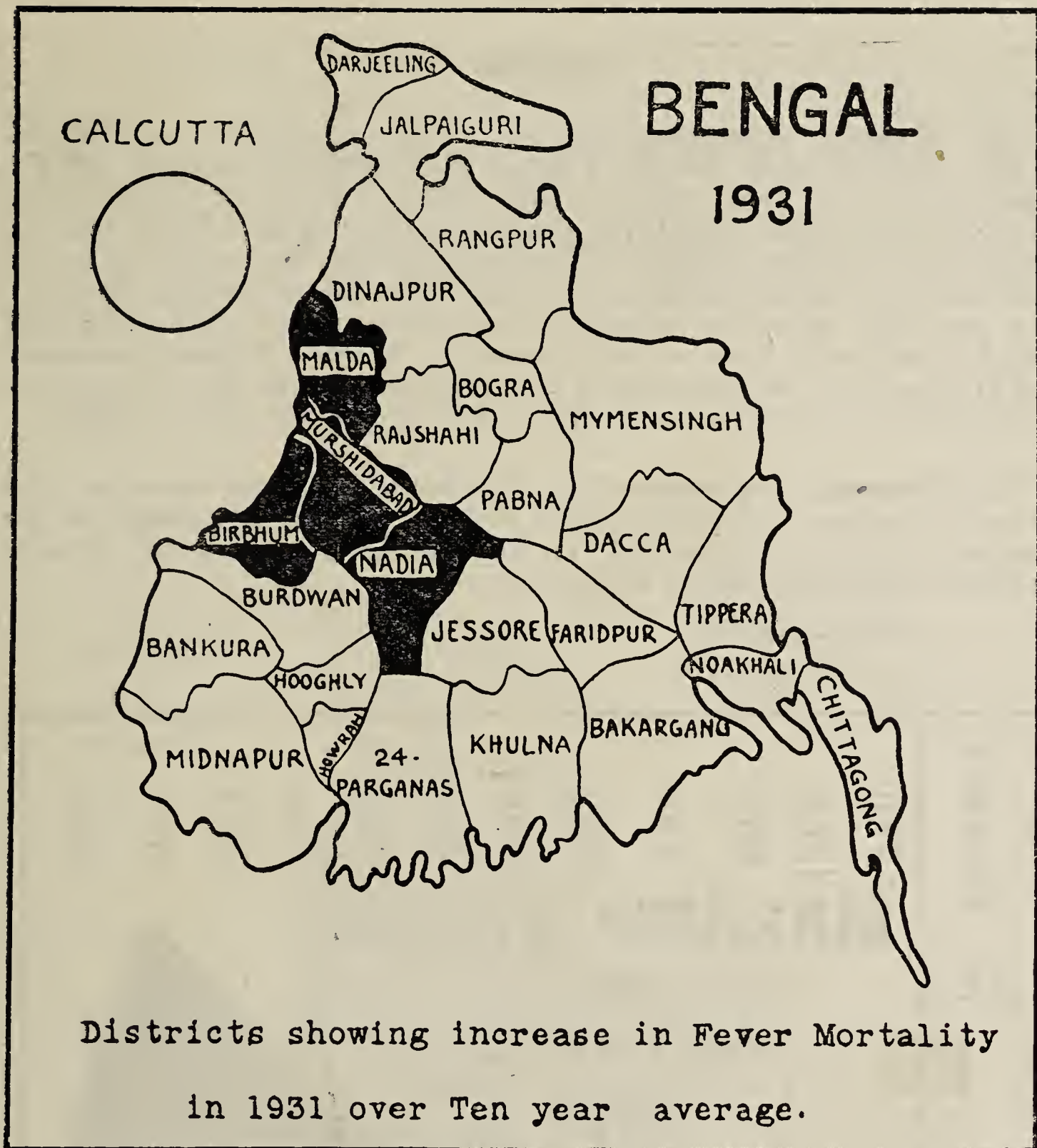
20 TO 25 " "



10 TO 15 " "



BELOW 10 PER 1000



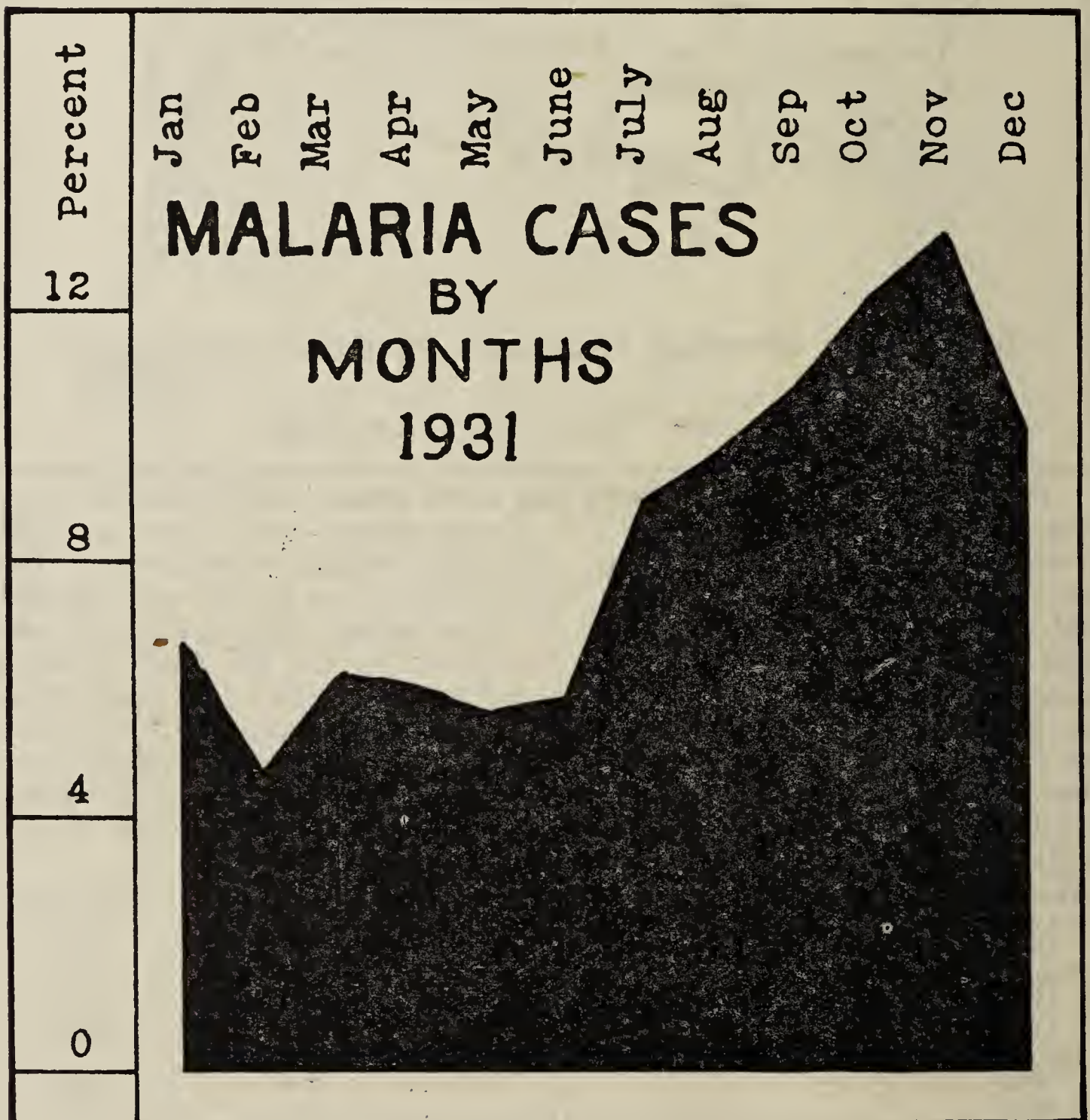
45. **Fever mortality in towns and rural areas.**—13,625 deaths were returned from towns and 718,159 deaths from rural areas in 1931 giving death rates of 3.9 and 15.5 per mille, respectively. The corresponding number of deaths during 1930 were 14,175 and 690,891 and the death rates were 4.5 and 15.9 per mille. The death rate was thus reduced by 13.3 per cent. in towns and by 2.5 per cent. in rural areas. Towns were responsible for 1.9 per cent. and the rural areas for 98.1 per cent. of the total fever mortality against 2.0 and 98.0 per cent. in the previous year. Sixty-six towns registered death rates above the urban average (3.9). Fifteen towns headed by Kurseong (17.6) returned rates above 10 per mille and 103 others below 10 per mille. Halisahar recorded .9 per mille.

Fever death rates per mille—					Municipal area.	Rural area.
1930	..	..	..	..	4.5	15.9
1931	..	..	..	..	3.9	15.5
Proportion of total deaths due to fever (per cent.)—						
1930	..	..	..	..	20.8	70.8
1931	..	..	..	..	20.3	68.6
Percentage of provincial fever mortality—						
1930	..	..	..	..	2.0	98.0
1931	..	..	..	..	1.9	98.1

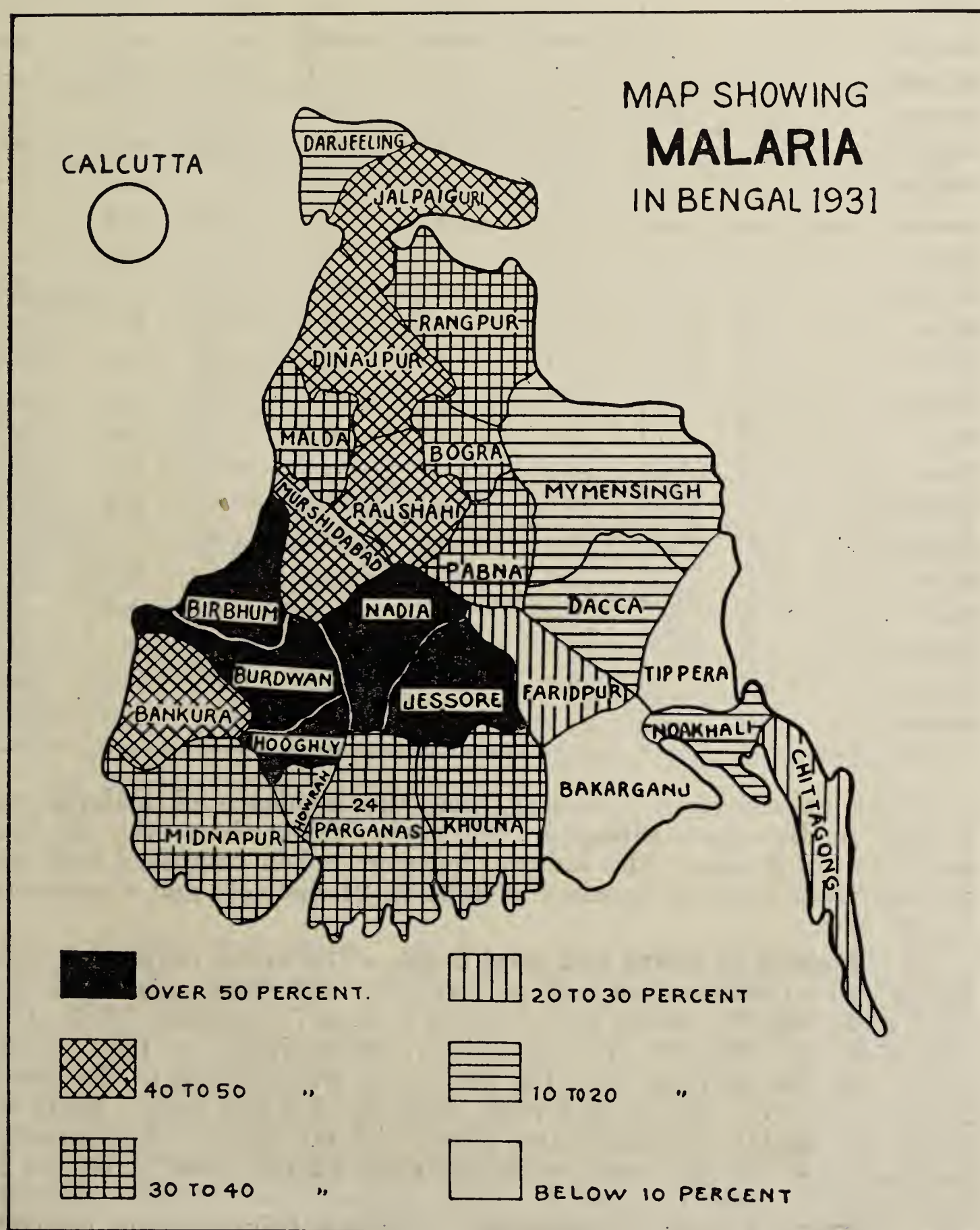
Malaria.

46. **General prevalence.**—Malaria was responsible for 349,111 deaths with a death rate of 7.0 per mille in 1931 against 336,879 deaths with 7.2 death rate in 1930. The number of deaths thus increased by 12,232 though the rate showed a fall of 2.8 per cent. as compared with that of 1930. (This anomaly may be explained by the fact that the censal population for 1931 has been calculated upon for the year 1931 instead of calculating on the population figure for 1921 which formed the basis of calculation for 1930.) Malaria accounted for 47.7 per cent. of fever deaths and 31.3 per cent. of the total provincial mortality in 1931 against 47.8 and 32.3, respectively, in 1930.

47. **Seasonal incidence.**—The following diagram showing the proportion of new admissions from malaria to total admissions to the various medical institutions in the province, month by month, indicates the usual course of malaria:—



48. **Malaria by districts.**—In 17 districts the death rate in 1931 was above the provincial average for malaria (7·0). Eight districts returned rates above 10·0 per mille, Malda once again standing at the top of the list with a death rate of 22·8 per mille. Seventeen others had rates between 1 and 10 per mille, while Calcutta and Bakarganj recorded rates below 1·0 per mille, Bakarganj showing a death rate of 0·1 per mille. Compared with the previous year, with the exception of 12 districts, all the others showed increased death rates from malaria.



Death rates from malaria per mille.

Districts.	1930.	1931.	Increase + or decrease —.	Fever indices.		Increase + or decrease —.
				1930.	1931.	
Malda	24·4	22·8	—1·6	42·6	34·3	—8·3
Rajshahi	21·9	20·4	—1·5	45·0	47·9	+2·9
Nadia	20·8	20·5	—0·3	56·5	55·8	—0·7
Jessore	17·9	18·4	+0·5	48·2	54·6	+6·4
Murshidabad	17·2	14·6	—2·6	41·7	44·5	+2·8
Dinaipur	15·2	11·4	—3·8	42·4	41·5	—0·9
Pabna	15·1	12·1	—3·0	40·1	38·0	—2·1
Jalpaiguri	10·5	9·9	—0·6	41·6	41·0	—0·6
Darjeeling	9·5	8·2	—1·3	16·8	13·7	—3·1
Birbhum	9·2	11·0	+1·8	47·0	55·8	+8·8
Bogra	8·9	9·2	+0·3	36·3	39·2	+2·9
Bankura	8·7	7·7	—1·0	43·1	43·8	+0·7
Rangpur	8·5	8·9	+0·4	26·6	33·6	+7·0
Faridpur	8·0	8·3	+0·3	26·6	29·9	+3·3
Burdwan	7·4	7·5	+0·1	53·4	57·7	+4·3
Khulna	6·7	7·4	+0·7	29·6	35·6	+6·0
Hooghly	6·4	7·1	+0·7	46·6	50·0	+3·4
Midnapur	5·6	7·0	+1·4	21·6	34·4	+12·8
Dacca	2·5	3·6	+1·1	9·7	14·8	+5·1
Howrah	2·2	1·5	—0·7	30·4	33·8	+3·4
24-Parganas	2·0	2·4	+0·4	27·6	33·9	+6·3
Mymensingh	1·4	1·9	+0·5	11·0	13·4	+2·4
Noakhali	1·4	1·5	+0·1	10·5	11·6	+1·1
Tippera	1·3	1·1	—0·2	7·2	9·8	+2·6
Chittagong	0·8	1·8	+1·0	16·8	20·1	+3·3
Calcutta	0·7	0·6	—0·1	6·8	7·4	+0·6
Bakarganj	0·04	0·1	+0·06	8·3	9·6	+1·3

Fever indices show, however, that the incidence of malaria was highest in Burdwan although the death rates show the highest mortality in Malda. The indices, however, when compared with the previous year show an increase in 1931 in 21 districts and a reduction in the rest.

49. **Malaria in towns and rural areas.**—The towns registered 2,990 deaths and a death rate of 0·85 per mille in 1931 from malaria and the rural areas 346,121 deaths with a death rate of 7·5 against 3,181 (1·02 per mille) and 333,698 (7·7 per mille), respectively, in 1930. Compared with the previous year the death rate was reduced in the towns by 16·7 per cent. and in the rural areas by 2·6 per cent. Forty-six towns out of 118 returned rates above the provincial urban average for malaria (0·8), the most noticeable rates having been registered in Kotchandpur (Jessore district) 13·2, Kumarkhali (Nadia district) 13·1, Chakdah (Nadia district) 12·3, Dhulian (Murshidabad district)

12·2, and Birnagar (Nadia district) 10·7. Narayanganj, Mymensingh and Comilla with ·03 per mille each, stood at the bottom of the list.

50. **Quinine consumption.**—7,835·5 lbs. of quinine were consumed in 1931 as compared with 7,468·3 lbs. in 1930. Burdwan, Birbhum, Midnapur, Hooghly, 24-Parganas, Calcutta, Jessore, Khulna, Rajshahi, Rangpur, Bogra, Dacca, Mymensingh and Faridpur, in which the fever indices had risen in the year under review, showed increased consumption, while Bankura, Howrah, Murshidabad, Bakarganj, Chittagong, Noakhali and Tippera reduced their consumption. The average consumption per head of population was highest in Jessore. The following statement shows the details of quinine consumption in every district:—

Quinine consumption in 1931.

Districts.	Total quinine consumed in lbs.		Increase + or decrease — per cent.	Grains of quinine consumed per head of the population.		Increase + or decrease — in grain per head.	Fever indices.		Increase + or decrease —.
	1930.	1931.		1930.	1931.		1930.	1931.	
Dacca ..	575·9	829·6	+44·0	1·3	1·7	+0·4	9·7	14·8	+5·1
Mymensingh ..	593·4	723·4	+21·9	0·9	1·0	+0·1	11·0	13·4	+2·4
Jessore ..	620·4	705·7	+13·7	2·5	2·9	+0·4	48·2	54·6	+6·4
Chittagong ..	690·2	680·0	—1·5	3·0	2·6	—0·4	16·8	20·1	+3·3
Faridpur ..	538·7	657·7	+22·1	1·7	1·9	+0·2	26·6	29·9	+3·3
Tippera ..	541·0	519·9	—3·9	1·4	1·2	—0·2	7·2	9·8	+2·6
Nadia ..	438·2	395·4	—9·8	2·1	1·8	—0·3	56·5	55·8	—0·7
Khulna ..	241·1	330·8	+37·2	1·2	1·4	+0·2	29·6	35·6	+6·0
Burdwan ..	313·1	318·8	+1·8	1·5	1·4	—0·1	53·4	57·7	+4·3
Pabna ..	448·5	298·8	—33·4	2·3	1·4	—0·9	40·1	38·0	—2·1
Noakhali ..	303·4	274·8	—9·4	1·4	1·1	—0·3	10·5	11·6	+1·1
Rangpur ..	193·1	226·2	+17·1	0·5	0·6	+0·1	26·6	33·6	+7·0
Rajshahi ..	185·7	195·4	+5·2	0·9	1·0	+0·1	45·0	47·9	+2·9
Midnapur ..	155·4	193·1	+24·2	0·4	0·5	+0·1	21·6	34·4	+12·8
24-Parganas ..	158·8	192·5	+21·2	0·4	0·5	+0·1	27·6	33·9	+6·3
Murshidabad ..	235·4	175·4	—25·5	1·3	0·9	—0·4	41·7	44·5	+2·8
Hooghly ..	148·0	170·8	+15·4	1·0	1·1	+0·1	46·6	50·0	+3·4
Bakarganj ..	189·7	168·0	—11·5	0·5	0·4	—0·1	8·3	9·6	+1·3
Malda ..	274·2	138·2	—49·6	1·9	0·9	—1·0	42·6	34·3	—8·3
Bogra ..	106·3	124·5	+17·1	0·7	0·8	+0·1	36·3	39·2	+2·9
Bankura ..	143·4	120·0	—16·3	1·0	0·7	—0·3	43·1	43·8	+0·7
Birbhum ..	84·5	116·5	+37·8	0·7	0·9	+0·2	47·0	55·8	+8·8
Dinajpur ..	105·1	95·4	—9·2	0·4	0·4	±0	42·4	41·5	—0·9
Calcutta ..	70·6	83·4	+18·1	0·4	0·5	+0·1	6·8	7·4	+0·6
Jalpaiguri ..	55·4	45·7	—17·5	0·4	0·3	—0·1	41·6	41·0	—0·6
Howrah ..	41·7	40·6	—2·6	0·3	0·3	±0	30·4	33·8	+3·4
Darjeeling ..	17·1	14·9	—12·9	0·4	0·3	—0·1	16·8	13·7	—3·1
Total ..	7,468·3	7,835·5	+4·9	..	..	..	..	..	..

Kala-azar.

51. **General prevalence.**—10,199 deaths were registered in 1931 from kala-azar, yielding a death rate of ·20 per mille. 696 deaths were returned from towns, of which 296 occurred in Calcutta and 9,503 from the rural areas. Compared with 1930, the death rate in all Bengal towns decreased by 23·1 per cent. and in Calcutta by 17·2 per cent. In rural areas the number of deaths decreased by 596, the death rate having diminished by 13 per cent. Twenty-seven towns returned rates above the provincial urban average (·20). The highest mortality from kala-azar 1·0 was registered in Chandrakona Municipality (Midnapur district). Forty-eight out of 118 towns did not record any

death from this cause. Kala-azar accounted for 1·39 per cent. of fever deaths and ·92 per cent. of total provincial mortality against 1·5 and 1·04 per cent., respectively, in 1930.

Deaths and death rates from kala-azar.

			Bengal Presidency.	All Bengal towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	10,914	815	315	10,099
1931	..	..	10,199	696	296	9,503
Death rates per mille—						
1930	..	..	0·23	0·26	0·29	0·23
1931	..	..	0·20	0·20	0·24	0·20

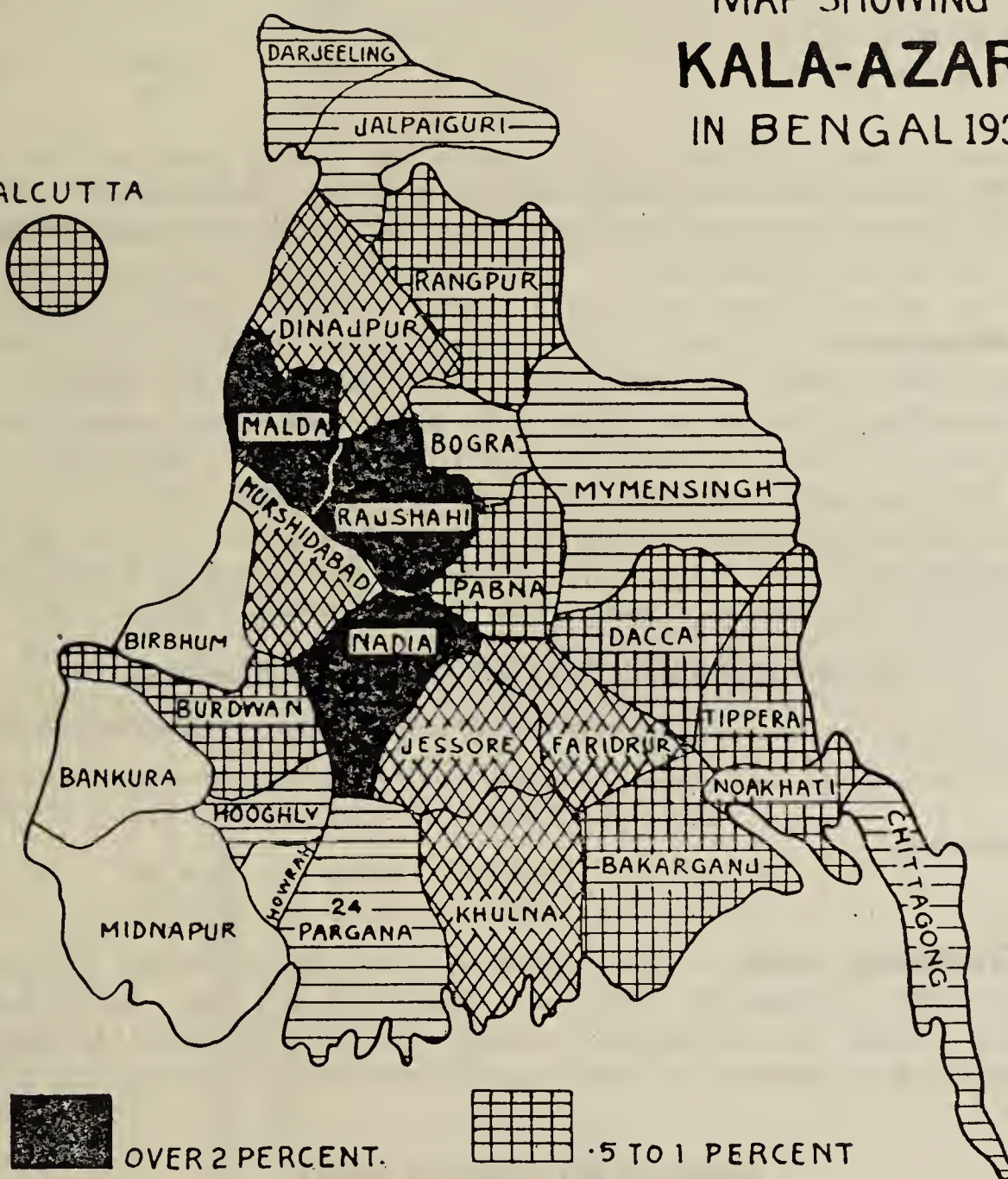
52. **Kala-azar in districts.**—The following table showing the number of new kala-azar cases admitted for treatment in the various districts since 1928 gives a better idea of the relative distribution of kala-azar in Bengal than that afforded by the mortality figures. It shows that the number of such cases was reduced in every district except in Murshidabad, Tippera, Malda, Khulna and Bogra where the increase was appreciable and in Dacca, Jessore, Bakarganj, Burdwan, Faridpur, Dinajpur, Pabna and Chittagong it was insignificant.

Number of kala-azar cases admitted for treatment.

Districts.			1928.	1929.	1930.	1931.
Rajshahi	..	..	12,039	11,921	11,675	9,681
24-Parganas	..	..	20,789	14,384	11,302	9,155
Nadia	..	..	8,075	7,845	6,824	6,549
Calcutta	..	..	12,218	10,640	6,922	6,322
Dacca	..	..	8,100	6,098	5,403	5,980
Murshidabad	..	..	2,063	2,696	3,947	5,737
Tippera	..	..	8,310	4,849	4,638	5,664
Malda	..	..	3,340	3,494	4,173	5,326
Jessore	..	..	7,008	5,563	4,807	5,014
Khulna	..	..	4,903	3,183	3,724	4,813
Bakarganj	..	..	6,456	6,008	3,963	4,588
Mymensingh	..	..	6,590	5,325	4,620	3,621
Burdwan	..	..	3,078	2,648	3,340	3,407
Rangpur	..	..	5,642	5,436	3,479	3,356
Hooghly	..	..	5,532	3,622	3,760	3,249
Faridpur	..	..	6,063	4,318	3,053	3,205
Dinajpur	..	..	4,493	3,703	2,730	2,992
Pabna	..	..	3,499	3,752	2,376	2,748
Noakhali	..	..	3,012	2,419	3,011	2,726
Bogra	..	..	2,341	1,167	876	1,758
Chittagong	..	..	1,578	1,401	1,411	1,751
Midnapur	..	..	1,453	1,217	1,179	1,258
Howrah	..	..	2,738	1,808	1,207	955
Jalpaiguri	..	..	1,992	1,148	1,091	748
Darjeeling	..	..	571	450	342	356
Bankura	..	..	46	66	100	138
Birbhum	..	..	41	44	64	54
Total	..	..	141,970	114,845	110,017	101,151

MAP SHOWING KALA-AZAR IN BENGAL 1931

CALCUTTA



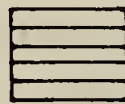
OVER 2 PERCENT.



.5 TO 1 PERCENT



1 TO 2



.25 TO .5



BELOW .25 PERCENT.

53. **Enteric fever.**—Compared with the previous year, the death rates from enteric fever in 1931 showed an increase of 4·2 per cent. in the province and also an increase of 4·3 per cent. in the rural areas. A decrease of 7·4 per cent. was recorded in Calcutta. The death rate in towns remained stationary (0·39 per mille).

Deaths and death rates from enteric fever.

			Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	11,144	1,222	729	9,922
1931	..	..	12,608	1,374	759	11,234
Death rates per mille—						
1930	..	..	0·24	0·39	0·68	0·23
1931	..	..	0·25	0·39	0·63	0·24

Fourteen towns returned rates above the urban average for enteric fever ($\cdot 39$), the highest being registered in Maheshpur (Jessore) ($1\cdot 5$). No death from enteric fever was returned from 64 towns. $1\cdot 7$ per cent. of fever deaths and $1\cdot 1$ per cent. of total provincial mortality were due to enteric fever against $1\cdot 6$ and $1\cdot 07$ per cent. in 1930.

54. **Measles.**—The death rate from measles in 1931 in the province as a whole as well as in the rural areas was stationary as compared with the corresponding figures for 1930. In all towns there was a decrease by $12\cdot 5$ per cent. and in Calcutta by $7\cdot 7$ per cent. Only four towns returned rates above the provincial urban average ($\cdot 07$). No death from measles was reported from 88 out of 118 towns in the province. Measles accounted for $\cdot 4$ per cent. of fever deaths and $\cdot 3$ per cent. of total provincial mortality against the same during 1930.

Deaths and death rates per mille from measles.

			Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	2,963	260	146	2,703
1931	..	..	2,954	245	147	2,709
Death rates per mille—						
1930	..	..	0·06	0·08	0·13	0·06
1931	..	..	0·06	0·07	0·12	0·06

55. **Relapsing fever.**—The following statement shows the number of deaths from relapsing fever as reported by the local sanitary authorities. They are obviously wrong and the Health Officers have been instructed to report in future such cases after making an accurate diagnosis.

Deaths from relapsing fever.

			Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	4,767	24	..	4,743
1931	..	..	5,705	8	..	5,697

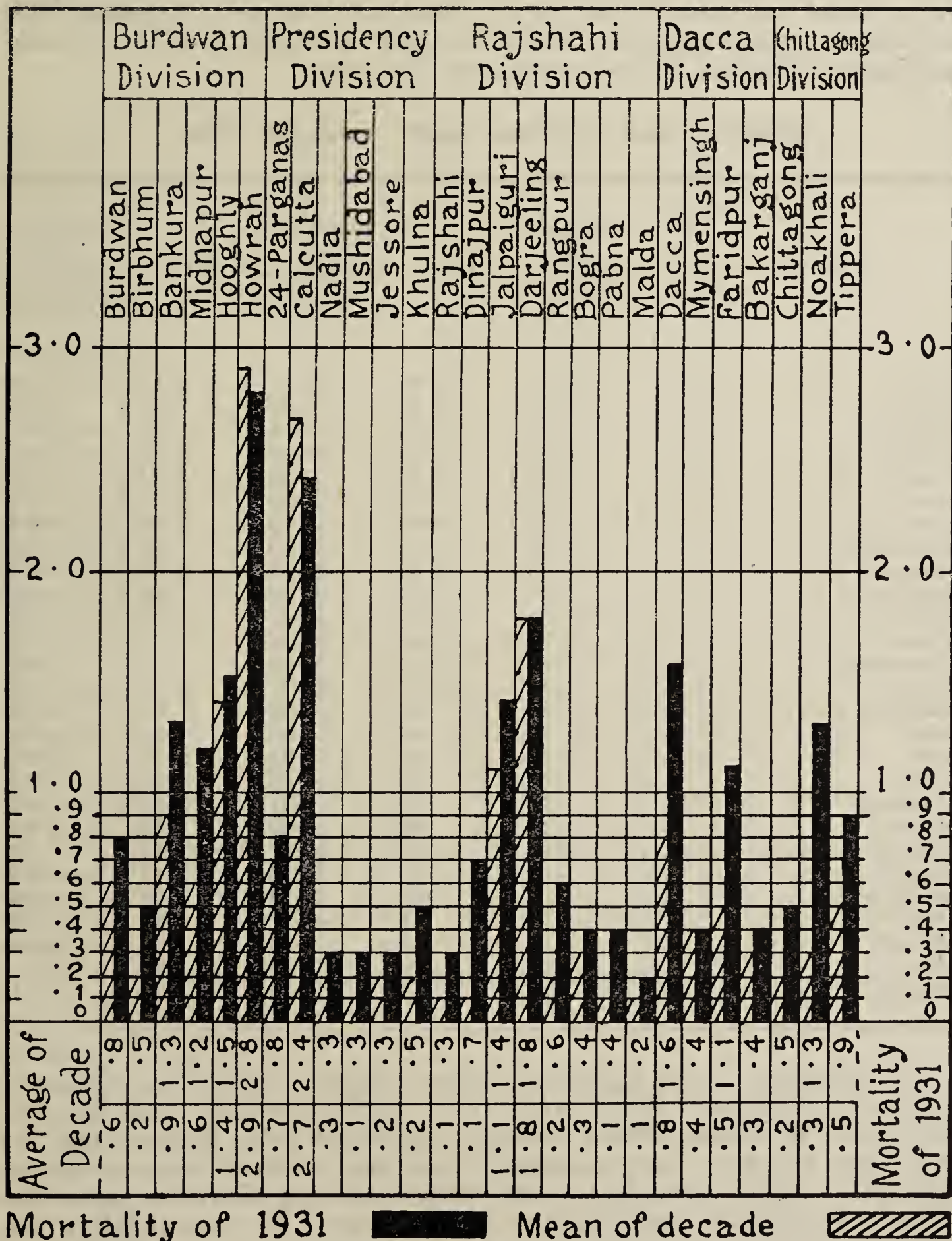
56. **Other fevers.**—351,207 deaths with a death rate of $7\cdot 0$ per mille were attributed in 1931 to “other fevers” against 338,399 deaths and $7\cdot 3$ per mille death rate. Of these, 8,312 deaths occurred in towns and 342,895 in rural areas, the death rates being $2\cdot 4$ and $7\cdot 4$ per mille, respectively, the corresponding figures for 1930 being 8,673, 329,726, $2\cdot 8$ and $7\cdot 6$. This shows that there was an increase of 12,808 deaths among these unclassified fevers in the province. There was an increase of 13,169 deaths from unclassified fevers in the rural areas while the towns showed a decline of 361 such deaths.

Dysentery and Diarrhœa.

57. **General prevalence.**—The total number of deaths reported from dysentery and diarrhœa was 42,764 with a death rate of $0\cdot 86$ in 1931 against 39,367 and $0\cdot 84$ in 1930. The death rate was thus increased by $2\cdot 4$ per cent. against 1930 and by $22\cdot 8$ per cent. against

the previous quinquennial average ($\cdot 7$). 22,554 males and 20,210 females died from this cause. Taking these two diseases separately, 24,014 deaths were due to dysentery and 18,750 to diarrhoea, against 22,252 and 17,115, respectively, in 1930, the corresponding ratios being $\cdot 5$ and $\cdot 4$ in 1931 against the same in 1930. Dysentery and diarrhoea accounted for 3.84 per cent. of total deaths against 3.77 in 1930.

Graph showing the Relative Intensity of Dysentery and Diarrhoea Mortality in each district of Bengal Presidency during the year 1931 and the average of Decade 1921 to 1930.



58. **Seasonal incidence.**—These two diseases followed their usual course, the highest mortality being registered in November and December 1931. The lowest mortality was registered in June 1931. Compared with 1930, the number of deaths was higher in every month of the year except during January, April and May.

59. **Dysentery and diarrhœa in districts.**—(a) *Combined dysentery and diarrhœa rates.*—Howrah and Calcutta, as usual, once more headed the list, while Malda ($\cdot 20$) was at the bottom of the list. Eight other districts registered rates between 1.0 and 2.0 per mille, and the rest below 1.0 per mille. Twelve districts returned death rates above the provincial average ($\cdot 86$). Compared with the average of the previous decade, all the districts but three showed increases in their death rates, the greatest increase occurring in Noakhali district. Against 1930 the rates were increased in 12 and reduced in 14 while in the remaining district (Malda) the rate remained the same.

Dysentery and diarrhœa death rates per mille.

Districts.	Average of decade, 1921-30.	1931.	Increase + or decrease — (per mille).	1930.	Increase + or decrease — (per mille).
Howrah	2.93	2.82	— .11	3.11	— .29
Calcutta	2.75	2.47	— .28	2.96	— .49
Darjeeling	1.84	1.83	— .01	1.82	+ .01
Hooghly	1.39	1.42	+ .03	1.41	+ .01
Jalpaiguri	1.07	1.42	+ .35	1.84	— .42
Bankura .. ..	.95	1.27	+ .32	1.33	— .06
Dacca .. ..	.84	1.59	+ .75	1.46	+ .13
24-Parganas .. ..	.68	.80	+ .12	.93	— .13
Midnapur .. ..	.62	1.21	+ .59	1.14	+ .07
Burdwan .. ..	.61	.87	+ .26	.88	— .01
Faridpur .. ..	.52	1.06	+ .54	1.00	+ .06
Tippera .. ..	.50	.89	+ .39	.74	+ .15
Mymensingh .. ..	.36	.43	+ .07	.44	— .01
Noakhali .. ..	.35	1.32	+ .97	1.39	— .07
Bakarganj .. ..	.31	.33	+ .02	.36	— .03
Nadia .. ..	.30	.36	+ .06	.54	— .18
Bogra .. ..	.28	.49	+ .21	.38	+ .11
Khulna .. ..	.24	.56	+ .32	.51	+ .05
Chittagong .. ..	.24	.51	+ .27	.30	+ .21
Rangpur .. ..	.21	.66	+ .45	.70	— .04
Birbhum .. ..	.18	.45	+ .27	.54	— .09
Jessore .. ..	.17	.33	+ .16	.41	— .08
Murshidabad .. ..	.15	.25	+ .10	.29	— .04
Pabna .. ..	.14	.41	+ .27	.29	+ .12
Rajshahi .. ..	.13	.35	+ .22	.32	+ .03
Malda .. ..	.11	.20	+ .09	.20	± 0
Dinajpur .. ..	.10	.72	+ .62	.31	+ .41

(b) *Dysentery and diarrhœa rates taken separately.*—Calcutta returned the highest death rate (1.34) from dysentery and Howrah (1.80) from diarrhœa. Nine districts registered rates higher than the provincial average for dysentery and ten higher than that for diarrhœa. Death rates from both dysentery and diarrhœa were increased in seven and reduced in eight others. In five districts the

death rate from dysentery was higher and that from diarrhoea lower than the previous year, while in four others the reverse was the case. In Birbhum, Jessore and Murshidabad, the death rate from diarrhoea was the same for both the years, but that from dysentery was reduced in all these three districts in 1931.

Dysentery and diarrhoea death rates per mille shown separately for each district.

Districts.	Dysentery.			Diarrhoea.		
	1930.	1931.	Increase + or decrease —.	1930.	1931.	Increase + or decrease —.
Calcutta ..	1·64	1·34	—·30	1·31	1·13	—·18
Darjeeling ..	1·26	1·30	+·04	·56	·53	—·03
Howrah ..	1·09	1·02	—·07	2·02	1·80	—·22
Dacca ..	1·07	1·08	+·01	·39	·51	+·12
Noakhali ..	·96	·84	—·12	·42	·48	+·06
Jalpaiguri ..	·93	·70	—·23	·91	·72	—·19
Faridpur ..	·69	·77	+·08	·30	·29	—·01
Midnapur ..	·51	·54	+·03	·62	·67	+·05
Tippura ..	·51	·68	+·17	·23	·21	—·02
24 Parganas ..	·50	·42	—·08	·43	·38	—·05
Hooghly ..	·40	·36	—·04	1·00	1·06	+·06
Nadia ..	·39	·25	—·14	·15	·11	—·04
Rangpur ..	·38	·44	+·06	·32	·22	—·10
Bankura ..	·33	·29	—·04	1·00	·98	—·02
Burdwan ..	·32	·33	+·01	·57	·54	—·03
Mymensingh ..	·30	·29	—·01	·15	·14	—·01
Khulna ..	·29	·33	+·04	·22	·23	+·01
Birbhum ..	·28	·19	—·09	·26	·26	±0
Bakarganj ..	·28	·26	—·02	·08	·07	—·01
Jessore ..	·26	·19	—·07	·14	·14	±0
Murshidabad ..	·22	·18	—·04	·07	·07	±0
Rajshahi ..	·22	·20	—·02	·10	·15	+·05
Bogra ..	·20	·25	+·05	·18	·24	+·06
Chittagong ..	·19	·30	+·11	·11	·21	+·10
Pabna ..	·17	·24	+·07	·11	·17	+·06
Dinajpur ..	·15	·33	+·18	·16	·39	+·23
Malda ..	·13	·12	—·01	·07	·08	+·01

60. **Dysentery and diarrhoea in towns and rural areas.**—The death rate in all towns was reduced in 1931 by 14·1 per cent. and in Calcutta by 16·6; in rural areas, however, it was increased by 4·1 per cent.

Dysentery and diarrhoea.

				All towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	..	7,739	3,188	31,628
1931	..	..	..	7,494	2,958	35,270
Death rates per mille—						
1930	..	..	..	2·48	2·96	0·73
1931	..	..	..	2·13	2·47	0·76

The highest death rate was returned from Ramjibanpur in Midnapur district (8·5) followed by Khirpai (8·4) and the lowest from Dainhat (Burdwan), Dhulian (Murshidabad), Muktagacha (Mymensingh) and Cox's Bazar (Chittagong), being ·2 per mille in each. No death from this cause was reported from Dum-Dum (24-Parganas) and Birnagar (Nadia).

Respiratory Diseases.

61. **General prevalence.**—Respiratory diseases claimed 62,351 victims in 1931 yielding a death rate of 1·24 per mille against 56,082 and 1·20 per mille, respectively, in 1930 showing an increase of 3·3 per cent. The death rate was higher by 37·8 per cent. than the provincial quinquennial average (·9). The death rate from pneumonia and phthisis remained the same, while other sub-heads showed increases when compared with 1930. 5·60 per cent. of total deaths were due to respiratory diseases against 5·37 in 1930.

Diseases.	Number.		Death rates per mille.		Percentage of increase + or decrease —.	Percentage of total deaths from respiratory diseases.	
	1930.	1931.	1930.	1931.		1930.	1931.
Influenza	3,171	4,714	·07	·09	+28·6	5·65	7·56
Pneumonia ..	25,784	27,599	·55	·55	±0	45·98	44·26
Phthisis ..	11,576	12,238	·24	·24	±0	20·64	19·62
Other respiratory diseases ..	15,551	17,800	·33	·35	+6·0	27·73	28·55

62. **Seasonal incidence.**—The highest mortality from respiratory diseases, 6,354, was registered in December, and the lowest, 4,234, in May. Compared with the previous year the death rates showed increases in the last seven months of the year, but were reduced during the remaining five months of the year. Against the previous decade they were higher in every month.

Seasonal mortality from respiratory diseases.

Months.			Average, 1921-30.	1930.	1931.	Percentages of difference between 1930 and 1931.
January	..	..	3,458	5,944	5,568	—6·3
February	..	..	3,182	5,370	5,150	—4·1
March	..	..	3,656	5,332	5,064	—5·0
April	..	..	3,021	5,152	4,851	—5·9
May	..	..	2,648	4,305	4,234	—1·7
June	..	..	2,288	3,697	5,117	+38·4
July	..	..	2,364	4,083	5,063	+24·0
August	..	..	2,483	3,783	5,508	+45·6
September	..	..	2,496	3,742	4,843	+29·4
October	..	..	2,823	4,387	4,579	+4·4
November	..	..	3,304	4,620	6,020	+30·3
December	..	..	3,680	5,667	6,354	+12·1

63. **Respiratory diseases by districts.**—Twelve districts returned death rates, above the provincial average (1·2). Calcutta had the highest rate (8·2) followed by Howrah and Darjeeling (3·6 in each). The lowest rate ·2 per mille was registered in Bakarganj. Compared with the average of the previous decade, all the districts showed increases except Calcutta in which there was a reduction of ·1 per mille in 1931. Against the previous year it was higher in 14 districts, lower in nine districts and remained stationary in the remaining four.

Death rates from respiratory diseases per mille.

Districts.	Average of decade, 1921-30.	1931.	Increase + or decrease — (per mille).	1930.	Increase + or decrease — (per mille).
Calcutta	8·3	8·2	— ·1	8·7	— ·5
Howrah	2·8	3·6	+ ·8	3·7	— ·1
Darjeeling	2·2	3·6	+1·4	3·4	+ ·2
Hooghly	1·5	2·8	+1·3	2·8	±0
Jalpaiguri	1·4	3·3	+1·9	3·9	— ·6
Bankura	1·2	1·8	+ ·6	2·1	— ·3
24-Parganas	1·0	1·3	+ ·3	1·6	— ·3
Burdwan	1·0	1·4	+ ·4	1·6	— ·2
Midnapur	·8	1·5	+ ·7	1·5	±0
Nadia	·8	1·1	+ ·3	1·0	+ ·1
Birbhum	·5	2·0	+1·5	1·9	+ ·1
Dacca	·4	1·0	+ ·6	1·0	±0
Bogra	·4	·6	+ ·2	·4	+ ·2
Faridpur	·4	1·1	+ ·7	1·0	+ ·1
Jessore	·3	·8	+ ·5	·9	— ·1
Khulna	·3	·9	+ ·6	·8	+ ·1
Tippera	·3	·4	+ ·1	·5	— ·1
Dinajpur	·3	1·8	+1·5	1·0	+ ·8
Murshidabad	·2	·5	+ ·3	·6	— ·1
Rangpur	·2	1·2	+1·0	·8	+ ·4
Mymensingh	·2	·4	+ ·2	·3	+ ·1
Pabna	·2	·6	+ ·4	·5	+ ·1
Chittagong	·2	·5	+ ·3	·3	+ ·2
Noakhali	·1	1·3	+1·2	1·2	+ ·1
Rajshahi	·1	·4	+ ·3	·3	+ ·1
Malda	·1	·3	+ ·2	·3	±0
Bakarganj	·1	·2	+ ·1	·1	+ ·1

64. **Respiratory diseases in urban and rural areas.**—During the year under review the death rate in towns, compared with the previous year, was reduced by 7·9 per cent. and in Calcutta by 5·8 per cent. It has increased in the rural areas by 11·1 per cent. 9,765 deaths from respiratory diseases occurred in Calcutta alone while 16,443 deaths occurred from the same cause in all towns. Ramjibanpur (Midnapur) registered the highest rate (10·7), followed by Khirpai (Midnapur) (9·7). Comilla recorded the lowest rate (·2 per mille). Chakdah (Nadia) recorded no death from respiratory diseases.

Deaths and death rates from respiratory diseases.

	All towns.	Calcutta.	Rural areas.
Number of deaths—			
1930	15,845	9,355	40,237
1931	16,443	9,765	45,908
Death rates per mille—			
1930	5·1	8·7	0·9
1931	4·7	8·2	1·0

Influenza.

65. **General prevalence.**—An excess of 1,543 deaths from influenza over those in the previous year was reported in 1931. The mortality increased by 1,490 in the rural areas and by 53 in all towns and by 73 in Calcutta. In the province the increase in the death rate was 28·6 per cent., but there was a reduction in all towns of 5·9 per cent. (It may here be pointed out that the reduction in the rate for all towns can be accounted for by the substitution of the 1931 census population against the population of 1921. As a matter of fact, however, the actual number of deaths in all towns from influenza in 1931 exceeded that of 1930 by 53.) There was increase in the death rate from influenza in Calcutta also by 5·1 per cent., and in the rural areas by 50 per cent. Influenza deaths were reported from 35 out of 118 towns in six of which the death rate was above the provincial urban average (·16). Ramjibanpur (Midnapur) recorded the highest death rate (1·0 per mille). In 22 towns the death rate was between 1 and 0·1 per mille, and in the remaining 12 below 0·1. The lowest rate, ·02 per mille each, was returned from Serampur, South Suburban and Bhatpara.

Deaths and death rates from influenza.

	Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—				
1918	20,901	..
1930	3,171	518
1931	4,714	571
			492	4,143
Death rates per mille—				
1930	0·07	0·17
1931	0·09	0·16
			0·41	0·09

66. **Influenza in districts.**—The rates were higher than the provincial average (·09) in seven districts. Seven districts returned death rates between 0·1 and 1·0 per mille and all the rest below 0·1. Darjeeling registered the highest death rate (0·54), followed by Jalpaiguri (·44) and Calcutta (·41). Bakarganj recorded the lowest rate (·006 per mille). Compared with the previous year the death rates were higher in 19 districts, lower in three others and unchanged in five.

Death rates from influenza per mille.

Districts.				1930.	1931.	Increase + or decrease —.
Calcutta	..	..	..	.39	.41	+ .02
Jalpaiguri	..	..	..	.31	.44	+ .13
Noakhali	..	..	..	.26	.20	— .06
Darjeeling	..	..	..	.16	.54	+ .38
Birbhum	..	..	..	.14	.19	+ .05
24-Parganas	..	..	..	.14	.08	— .06
Howrah	..	..	..	.12	.07	— .05
Hooghly	..	..	..	.08	.08	±0
Bankura	..	..	..	.07	.07	±0
Midnapur	..	..	..	.06	.06	±0
Murshidabad	..	..	..	.06	.06	±0
Dinajpur	..	..	..	.06	.29	+ .23
Rangpur	..	..	..	.06	.12	+ .06
Tippera	..	..	..	.06	.07	+ .01
Burdwan	..	..	..	.05	.07	+ .02
Chittagong	..	..	..	.05	.07	+ .02
Dacca	..	..	..	.04	.06	+ .02
Khulna	..	..	..	.03	.04	+ .01
Nadia	..	..	..	.02	.03	+ .01
Jessore	..	..	..	.02	.02	±0
Bogra	..	..	..	.02	.04	+ .02
Mymensingh	..	..	..	.02	.05	+ .03
Faridpur	..	..	..	.02	.09	+ .07
Malda	..	..	..	.02	.05	+ .03
Rajshahi	..	..	..	.01	.02	+ .01
Pabna	..	..	..	.007	.02	+ .013
Bakarganj	..	..	..	.004	.006	+ .002

Pneumonia.

67. **General prevalence.**—The total number of deaths from pneumonia in the province is 27,599 in 1931, the death rate remaining stationary as compared with 1930. There was an excess of 1,815 deaths from pneumonia in 1931 over that of 1930. The death rate remained the same in the rural areas, in the towns the rate decreased by 10·3 per cent. and in Calcutta by 7·4 per cent. It may here be noted, however, that the actual number of deaths from pneumonia in 1931 exceeded that of 1930 by 83 in all towns, 94 in Calcutta and 1,732 in the rural areas. Only six towns did not return any death from this cause. Twenty-seven towns recorded death rates above the provincial urban average (1·92). The highest mortality was registered in Khirpai (7·3) and the lowest (0·1 per mille) each in Tamluk (Midnapur), Titagarh (24-Parganas), Dhulian (Murshidabad), Pabna, Kishorganj, Noakhali, Comilla and Brahmanberia.

Deaths and death rates from pneumonia.

				Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—							
1930	..	..		25,784	6,677	3,491	19,107
1931	..	..		27,599	6,760	3,585	20,839
Death rates per mille—							
1930	..	..		0·55	2·14	3·24	0·44
1931	..	..		0·55	1·92	3·00	0·44

68. **Pneumonia in districts.**—In 11 districts death rates were higher than the provincial average (.55). Five districts returned rates above 1.0 per mille, Calcutta with its 3.00 per mille standing at the top of the list, followed by Hooghly (1.81). Mymensingh and Bakarganj registered .09 and .05 per mille respectively. The remaining districts recorded rates between these two extremes. Compared with the previous year 12 districts returned higher rates, ten lower and the remaining five equal.

Death rates from pneumonia per mille.

Districts.				1930.	1931.	Increase + or decrease —.
Calcutta	..	..	..	3.24	3.00	— .24
Jalpaiguri	..	..	..	2.42	1.70	— .72
Hooghly	..	..	..	1.80	1.81	+ .01
Howrah	..	..	..	1.50	1.47	— .03
Darjeeling	..	..	..	1.18	1.10	— .08
Bankura	..	..	..	1.09	.94	— .15
Midnapur	..	..	..	.88	.92	+ .04
Burdwan	..	..	..	.86	.78	— .08
24-Parganas	..	..	..	.82	.67	— .15
Birbhum	..	..	..	.69	.53	— .16
Nadia	..	..	..	.61	.61	±0
Dinajpur	..	..	..	.59	.97	+ .38
Jessore	..	..	..	.51	.51	±0
Noakhali	..	..	..	.41	.44	+ .03
Khulna	..	..	..	.39	.46	+ .07
Faridpur	..	..	..	.39	.43	+ .04
Murshidabad	..	..	..	.36	.20	— .16
Dacca	..	..	..	.31	.31	±0
Rangpur	..	..	..	.29	.47	+ .18
Pabna	..	..	..	.24	.24	±0
Chittagong	..	..	..	.16	.34	+ .18
Bogra	..	..	..	.14	.21	+ .07
Malda	..	..	..	.14	.14	±0
Tippera	..	..	..	.14	.13	— .01
Rajshahi	..	..	..	.12	.17	+ .05
Mymensingh	..	..	..	.08	.09	+ .01
Bakarganj	..	..	..	.03	.05	+ .02

Phthisis.

69. **General prevalence.**—Deaths reported from this cause amounted to 12,238 in the province in 1931, showing an increase of 662 over the previous year. The increase in rural areas was 551 and in towns 111. The death rates, however, were lower than those in the previous year by 8·6 per cent. in all towns and 5·9 per cent. in Calcutta. The rates in the province and in the rural areas remained stationary. 71·4 per cent. of the deaths in all towns occurred in Calcutta alone. Five towns reported death rates above the provincial urban average (1·06), five towns returned rates above 1·0 per mille, 95 between 1 and 0·1 per mille, and 4 below 0·1 per mille (Bankura ·03, Pabna, Madaripur and Brahmanberia ·04 each). No death from this cause was reported from 12 towns.

Phthisis.

			Province.	All towns.	Calcutta.	Rural areas.
Number of deaths—						
1930	..	..	11,576	3,615	2,547	7,961
1931	..	..	12,238	3,726	2,662	8,512
Death rates per mille—						
1930	..	..	0·24	1·16	2·36	0·18
1931	..	..	0·24	1·06	2·22	0·18

70. **Phthisis in districts.**—Calcutta returned the highest death rate, 2·22 per mille, followed by Darjeeling (1·15); 20 others between 0·1 and 1·0 per mille and the remaining five below 0·1, the lowest rate 0·04 being registered in Bakarganj. The death rates in ten districts were higher than the provincial average (·24). Compared with the previous year the rates stood higher in 1931 in 11 districts, were lower in 15, and continued the same in one district only.

MAP SHOWING TUBERCULOSIS IN BENGAL 1931

CALCUTTA



OVER 1 PERCENT.

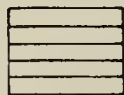


15 TO 25 PERCENT.



5 TO 10

"



10 TO 15

"



25 TO 50

"



BELOW 10

"

Death rates from phthisis per mille.

Districts.				1930.	1931.	Increase + or decrease —.
Calcutta	..	..	..	2.36	2.22	— .14
Darjeeling	..	..	..	1.35	1.15	— .20
Howrah	..	..	..	.79	.71	— .08
Jalpaiguri	..	..	..	.75	.68	— .07
Hooghly	..	..	..	.47	.41	— .06
Bankura	..	..	..	.36	.35	— .01
24-Parganas	..	..	..	.31	.23	— .08
Birbhum	..	..	..	.29	.26	— .03
Burdwan	..	..	..	.28	.30	+ .02
Midnapur	..	..	..	.24	.28	+ .04
Dacca	..	..	..	.19	.21	+ .02
Nadia	..	..	..	.18	.20	+ .02
Jessore	..	..	..	.17	.14	— .03
Faridpur	..	..	..	.17	.15	— .02
Khulna	..	..	..	.16	.17	+ .01
Rangpur	..	..	..	.16	.15	— .01
Dinajpur	..	..	..	.15	.27	+ .12
Pabna	..	..	..	.13	.15	+ .02
Murshidabad	..	..	..	.12	.11	— .01
Bogra	..	..	..	.11	.14	+ .03
Mymensingh	..	..	..	.11	.12	+ .01
Noakhali	..	..	..	.08	.11	+ .03
Tippera	..	..	..	.08	.08	±0
Malda	..	..	..	.07	.06	— .01
Rajshahi	..	..	..	.06	.07	+ .01
Chittagong	..	..	..	.06	.05	— .01
Bakarganj	..	..	..	.05	.04	— .01

71. **Other respiratory diseases.**—5,386 deaths reported under this head were registered in towns and 12,414 in rural areas, making up a total of 17,800 against 5,035, 10,516 and 15,551, respectively, in 1930,

showing an increase of 351 deaths in towns, 1,898 in the rural areas, the net result being an increase of 2,249 deaths in the province.

72. **Venereal Disease.**—The Civil Surgeon of the Chittagong Hill Tracts reports that 94 *myang* patients were treated in the Manikcheri and Ramgarh dispensaries during 1931 and 1932. *Myang* is the local name for a phase of venereal disease.

Injuries.

73. **General prevalence.**—The total number of deaths from injuries increased in 1931 by 1,321. There was an increase of 703 under wounds and accidents and of 265 under snake-bites, while suicides and rabies increased by 127 and 226, respectively. Injuries accounted for 1.86 per cent. of the total deaths in the province.

				1930.	1931.
Deaths from injuries—					
Suicide	..	..		2,835	2,962
Wounds and accidents	..	..		11,772	12,475
Snake-bite and attacks of wild animals				4,210	4,475
Rabies	..	..	..	580	806
Total				19,397	20,718
Death rates per mille—					
Suicide	..	..	..	.06	.06
Wounds and accidents	..	..	..	.25	.25
Snake-bite and attacks of wild animals			..	.09	.09
Rabies	..	..	..	.01	.02
Total				.42	.41

74. **Deaths due to injuries in towns and rural areas.**—206 deaths from suicides, 1,259 from wounds and accidents, 74 from snake-bites and 53 from rabies, making up a total of 1,592 with a death rate of .45 per mille occurred in towns against 1,666 with a rate of .53 in 1930. Of the total deaths in all towns 704 or about 44.2 per cent. were registered in Calcutta. The highest death rate from injuries (1.8 per mille) was returned from Gobardanga in 24-Parganas district and the lowest (.04) from Champdani, Krishnagar and Rangpur each. The rural areas returned 19,126 deaths against 17,731 in 1930. The death rates were reduced by 15.1 per cent. in all towns, by 13.2 per cent. in Calcutta, and it remained stationary in the rural areas.

Causes.	Deaths.			Death rates per mille.		
	All towns.	Calcutta.	Rural areas.	All towns.	Calcutta.	Rural areas.
Suicides	206	41	2,756	.06	.03	.06
Wounds and accidents ..	1,259	640	11,216	.36	.53	.24
Snake-bites and attacks of wild animals	74	1	4,401	.02	.0008	.09
Rabies	53	22	753	.01	.02	.02
Total—						
1931	1,592	704	19,126	.45	.59	.41
1930	1,666	730	17,731	.53	.68	.41

75. **Deaths due to injuries by districts.**—The highest death rate from suicide was returned from Nadia and Jessore ($\cdot 14$) each, from wounds and accidents from Calcutta and Noakhali ($\cdot 53$) each, from snake-bites from Rajshahi ($\cdot 24$) and from rabies from Darjeeling ($\cdot 10$); the lowest from suicide from Rangpur, Chittagong, Noakhali and Tippera ($\cdot 02$ each), from wounds and accidents from Rangpur ($\cdot 11$), from snake-bite from Calcutta ($\cdot 0008$) and from rabies from Bakarganj and Tippera ($\cdot 003$ each).

Districts.	Suicides.		Wounds and accidents.		Snake-bites.		Rabies.	
	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.
Burdwan ..	80	$\cdot 05$	394	$\cdot 25$	130	$\cdot 08$	11	$\cdot 007$
Birbhum ..	62	$\cdot 06$	209	$\cdot 22$	103	$\cdot 11$	13	$\cdot 01$
Bankura ..	62	$\cdot 06$	196	$\cdot 18$	96	$\cdot 09$	13	$\cdot 01$
Midnapur ..	114	$\cdot 04$	824	$\cdot 29$	319	$\cdot 11$	104	$\cdot 04$
Hooghly ..	98	$\cdot 09$	272	$\cdot 24$	137	$\cdot 12$	14	$\cdot 01$
Howrah ..	134	$\cdot 12$	405	$\cdot 37$	84	$\cdot 08$	13	$\cdot 01$
24-Parganas	327	$\cdot 12$	649	$\cdot 24$	314	$\cdot 11$	33	$\cdot 01$
Calcutta ..	41	$\cdot 03$	640	$\cdot 53$	1	$\cdot 0008$	22	$\cdot 02$
Nadia ..	217	$\cdot 14$	413	$\cdot 27$	280	$\cdot 18$	46	$\cdot 03$
Murshidabad	100	$\cdot 07$	369	$\cdot 27$	317	$\cdot 23$	21	$\cdot 01$
Jessore ..	239	$\cdot 14$	315	$\cdot 19$	218	$\cdot 13$	31	$\cdot 02$
Khulna ..	173	$\cdot 11$	420	$\cdot 26$	239	$\cdot 14$	25	$\cdot 01$
Rajshahi ..	175	$\cdot 12$	346	$\cdot 24$	342	$\cdot 24$	18	$\cdot 01$
Dinajpur ..	76	$\cdot 04$	488	$\cdot 28$	355	$\cdot 20$	154	$\cdot 09$
Jalpaiguri ..	28	$\cdot 03$	179	$\cdot 18$	62	$\cdot 06$	4	$\cdot 004$
Darjeeling	23	$\cdot 07$	67	$\cdot 21$	8	$\cdot 02$	33	$\cdot 10$
Rangpur ..	43	$\cdot 02$	291	$\cdot 11$	112	$\cdot 04$	18	$\cdot 007$
Bogra ..	107	$\cdot 10$	234	$\cdot 21$	130	$\cdot 12$	7	$\cdot 006$
Pabna ..	66	$\cdot 04$	369	$\cdot 25$	191	$\cdot 13$	25	$\cdot 02$
Malda ..	66	$\cdot 06$	129	$\cdot 12$	148	$\cdot 14$	12	$\cdot 01$
Dacca ..	116	$\cdot 03$	614	$\cdot 18$	157	$\cdot 04$	37	$\cdot 01$
Mymensingh	210	$\cdot 04$	799	$\cdot 15$	170	$\cdot 03$	63	$\cdot 01$
Faridpur ..	115	$\cdot 04$	376	$\cdot 16$	192	$\cdot 08$	44	$\cdot 02$
Bakarganj	158	$\cdot 05$	1,297	$\cdot 44$	182	$\cdot 06$	8	$\cdot 003$
Chittagong	34	$\cdot 02$	720	$\cdot 40$	50	$\cdot 03$	14	$\cdot 008$
Noakhali ..	35	$\cdot 02$	908	$\cdot 53$	92	$\cdot 05$	12	$\cdot 007$
Tippera ..	63	$\cdot 02$	552	$\cdot 18$	46	$\cdot 01$	11	$\cdot 003$

(a) *Suicides.*—1,639 females were reported to have committed suicide against 1,323 males during the year 1931.

(b) *Snake-bites*.—458 cases of snake-bites were treated in the various hospitals and dispensaries, 48 with potash permanganate, 2 with anti-venene and 54 with lexin. In addition to these, 339 cases were treated in various union boards. In many cases the results were not reported. Twenty cases are said to have been cured with potash permanganate.

76. **All other causes**.—167,414 deaths were registered in 1931 as having been due to "All other causes" against 158,113 in 1930. Of these 22,577 were shown to have occurred in towns and 144,837 in the rural areas of the province against 21,552 and 136,561, respectively, in 1930. The death rates were 3.3 (provincial), 6.4 (urban) and 3.1 (rural) against 3.4, 6.9 and 3.1 per mille, respectively, during 1930.

Chapter IV.

FAIRS AND FESTIVALS.

77. No case of infectious disease was reported from any other fair held in the province during the year 1931, except from the Ganga Sagar mela, in the district of 24-Parganas, held in the month of January and the Nangalbundh fair, in the district of Dacca, held in the month of March. The Dacca District Health Officer appears to be the only one who sends a report after the mela is over.

Ganga Sagar mela.—It was held on the 13th, 14th and 15th of January 1931 and was attended by 48,900 pilgrims, 16,900 arriving there by steamers and the rest by roads and boats. Usual arrangements were made for embarkation and disembarkation. There was no infectious disease either on the down or on the up journey. Arrangements for water-supply were made by the Assistant Engineer, Public Health Department. Conservancy arrangements were the same as in the previous year. The District Health Officer, 24-Parganas, and his staff inspected food-stuffs. Sufficient care was exercised to prevent unwholesome articles of food being consumed. A stall was set up decorated with coloured posters on diseases. The pilgrims were addressed by the medical officer in charge who explained the object of the posters.

Control of infectious diseases.—The temporary outdoor dispensary was opened on the 12th January and was continued till the 15th January. There were five attacks of and one death from cholera; the cases were segregated in the isolation hospital; 441 anti-cholera inoculations were done in the mela ground and necessary disinfection was performed. The following voluntary organisations:—(1) Bajrang Parishad, (2) Sri Krishna Parishad, (3) Kidderpore Seva Samiti, (4) Astanga Ayurveda Samiti, (5) and (6) medical volunteers from the Carmichael Medical College and the National Medical School, (7) Life Saving Society and (8) Sanatan Dharma-abalambi Agarwala Seva Samiti and also the police were entrusted with the duties of managing the crowd, attending the sick and lost, protection of water-supplies and extinction of fire which they discharged ably. The following statement shows the possible role played by the Sagar mela in the spread of cholera in the adjoining districts:—

Localities.	Weekly cholera attacks and deaths on—													
	6th December 1930		13th December 1930.		20th December 1930.		27th December 1930.		3rd January 1931.		10th January 1931.		17th January 1931.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.
Calcutta city ..	2	1	10	7	9	6	7	4	6	5	8	4	36	25
24-Parganas district ..	6	1	4	..	51	22	12	4	43	20	14	4	118	62
Howrah district ..	2	1	3	2	20	11	11	9	3	..	26	16	41	20
Hooghly district ..	5	3	4	..	1	..	1	..	2	..	6	..	3	..
Midnapur district	166	75	67	29	21	11	112	53	58	22	60	26	69	24

Localities.	Weekly cholera attacks and deaths on—												Cholera mortality for 5 weeks preceding the mela.	Cholera mortality for 5 weeks following the mela.
	24th January 1931.		31st January 1931.		7th February 1931.		14th February 1931.		21st February 1931.		28th February 1931.			
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.		
Calcutta city ..	29	19	24	19	32	23	27	22	33	25	45	26	26	108
24 Parganas district ..	61	37	128	55	99	34	189	81	90	42	185	104	50	249
Howrah district	27	18	9	7	18	13	22	13	16	8	51	32	38	59
Hooghly district	4	2	8	5	14	8	7	6	19	8	20	12	..	29
Midnapur district ..	70	35	231	95	232	101	161	77	188	94	197	90	141	402

N. B.—There was no case of smallpox in the mela.

Nangalbundh mela.—It was held on the 27th of March though it is usually held in the month of April. The mela was attended by about 100,000 pilgrims. The District Health Officer and his staff supervised the sanitary arrangements of the mela from the 25th to the 28th March 1931. Volunteers of the Sevak Sammilan helped in the management of the mela.

Control of infectious diseases.—Six cases were admitted in the cholera shed; two were found to be of diarrhoea and the rest cholera, of which one proved to be fatal.

Chapter V.

URBAN SANITATION AND WATER-SUPPLIES.

78. **Sanitary administration in municipal areas.**—Twenty-one health officers and 99 sanitary inspectors were employed in the municipalities of the province, excluding Calcutta. The total number of the sanctioned appointments for health officers and sanitary inspectors was 21 and 100, respectively. Only the Santipur Municipality failed to maintain a sanitary inspector. Out of the three sanctioned posts of sanitary inspectors, the Bhatpara Municipality, as in the previous year, maintained only two sanitary inspectors—one post remaining vacant throughout the year. The Gaibandha Municipality continued maintaining a sanitary inspector although not yet required to do so under the Bengal Municipal Act.

During the year 1931, the three Assistant Directors of Public Health (two stationed in Calcutta for Burdwan and Presidency Circles, respectively, and one at Dacca) inspected 28 municipalities; of these 13 and 10 were done by the Assistant Directors of Public Health of Presidency and Dacca Circles, respectively.

Finance.—The financial aspect of public health administration, as dealt with in the next three paragraphs, is based on the Government resolution reviewing the reports on the working of municipalities, districts boards and union boards in Bengal during the financial year 1930-31, the population being taken from the 1931 census.

(a) *Municipal income.*—During the year 1930-31, there were 117 municipalities in Bengal, excluding Calcutta, with an aggregate population of 2,314,851 and an average population of 19,784 for each municipality. The total income excluding the opening balance and extraordinary income and debts was Rs. 85,01,457 as compared with Rs. 97,91,172 of the previous year, the average for each municipality amounting to Rs. 72,662 and that per head of population to Rs. 3-10-9 against Rs. 83,685 and Rs. 4-13, respectively, in 1929-30. The total receipts including the opening balance were Rs. 1,09,89,468 against Rs. 1,32,41,177 in the previous year. The opening balance stood at Rs. 14,90,137 and the extraordinary income and debts at Rs. 9,97,874 against Rs. 15,07,381 and Rs. 19,42,624, respectively, in the year preceding. The total income excluding the opening balance thus showed a decrease of Rs. 10,89,715 or 11·3 per cent. and the total receipts including the opening balance that of Rs. 22,51,709 or 17·0 per cent. over the previous year. The average incidence of taxation per head of population was Rs. 3-3-9 against Rs. 3-8-10 in the previous year.

(b) *Municipal expenditure.*—The total expenditure (excluding extraordinary debt) was Rs. 84,00,715 against Rs. 92,92,327 in the previous

year, showing a decrease of Rs. 8,91,612 or 9·6 per cent. The following table shows the expenditure on the several heads in proportion to the total receipts including the opening balance for the year:—

Works.	Total expenditure 1930-31.	Percentage proportion to the total receipts.		Increase + or decrease —.
		1929-30.	1930-31.	
	Rs.			
Sanitary works	47,25,850	42·4	45·7	+3·3
Public safety	7,22,964	5·5	6·5	+1·0
Roads	7,75,679	6·4	7·0	+0·6
All other requirements ..	21,76,222	15·9	19·8	+3·9

The average expenditure per head of municipal population on the several items of sanitary works is shown below:—

Items of expenditure.	Total expenditure, 1930-31.	Average expenditure per head of population.		Percentage, increase + or decrease —.
		1929-30.	1930-31.	
	Rs.	Rs. Rs. a. p.	Rs. Rs. a. p.	
Conservancy	23,76,275	1·236=1 3 9·3	1·026=1 0 5·1	—17·0
Water-supply	11,34,057	·848=0 13 6·8	·490=0 7 10·0	—42·2
Drainage	3,59,893	·275=0 4 4·8	·155=0 2 5·8	—43·7
Disposal of the dead (including burial ground and burning ghat charges)	42,789	·024=0 0 4·6	·018=0 0 3·5	—25·0
Markets and slaughter houses ..	62,290	·039=0 0 7·5	·026=0 0 5·1	—33·3
Medical relief (hospital and epidemic charges)	3,33,220	·182=0 2 10·9	·143=0 2 4·1	—21·4
Vaccination	38,551	·018=0 0 3·5	·016=0 0 3·1	—11·1
Charges on account of Health Officers and Sanitary Inspectors ..	1,91,585	·094=0 1 6·0	·082=0 1 3·8	—12·8
Registration of births and deaths ..	17,828	·009=0 0 1·7	·007=0 0 1·4	—22·2
Other sanitary requirements ..	1,69,352	·037=0 0 7·1	·073=0 1 2·0	+97·3
Total ..	47,25,840	2·763=2 12 2·5	2·036=2 1 1·1	—26·3

Compared with the previous year, while the expenditure on each individual head decreased in 1930-31, with the exception of “Other sanitary requirements” which increased by 97·3, the total expenditure appears to be reduced by 26·3 per cent. The aggregate expenditure

incurred by some of the municipalities on certain subsidiary heads during the year under review was as follows:—

	1929-30.	1930-31.
1. Anti-malaria measures	4,877	4,326
2. Public health propaganda work including health exhibition ..	4,557	4,900
3. Infectious diseases hospitals	19,008	12,008

The expenditure incurred during the year 1930-31 on main water-supply schemes of municipalities was as follows:—

	Rs.
North Chandpur Waterworks Scheme	1,53,000
English Bazar Water-supply Scheme	1,14,000
Bansberia Water-supply Scheme	76,863
Laying of the southern reservoir at Senchal in Darjeeling	80,000
Improvement of the Darjeeling Water-supply	50,000
Improvement of Dacca Waterworks	42,980
Suri Drainage Scheme	34,000
Suri Water-supply Scheme	23,000
Repairs to Patuakhali Waterworks	9,065
Capital outlay for Uttarpara Drainage Scheme	6,260
Acquisition of land for trenching ground for the Dum-Dum Municipality ..	7,593
Capital outlay for Tollyganj Municipal Water-supply	5,228

Chapter VI.

RURAL SANITATION.

79. **Bengal rural public health organisation.**—It was described fully in the last year's report and is working satisfactorily in 25 districts, because in Darjeeling district the District Health Officer only has been appointed so far. A few salient points are noted below:—

(a) *Vital statistics registration* and reporting of epidemics, on the whole, has improved though some District Health Officers still report unsatisfactory.

(b) *Cholera.*—A large number of anti-cholera inoculations were done in every district; 11,755 deaths were reported from Dacca, 5,116 from Tippera, 4,523 from Mymensingh, 3,553 from Bakarganj, 3,288 from Faridpur, 3,919 from 24-Parganas and 3,515 from Khulna; in all other districts deaths from cholera were less than 3,000.

(c) *Smallpox* deaths in Dacca and Tippera were 1,307 and 655, respectively; in all other districts it was less than 500 and in Khulna and Pabna 22 and 10, respectively—a great improvement due to thorough vaccination by the rural public health staff as compared with figures of 10 years ago.

(d) *Malaria* still takes a heavy toll and it is difficult to control this disease with the present funds and staff available in the rural health circles.

* * * * *

(f) *Dai-training classes* were held in 23 districts and the number of dais trained varied from 10 in Mymensingh district to 94 in Birbhum district.

(g) *Bengal Food Adulteration Act* was administered through the sanitary inspectors in all the districts and the number of samples sent to the Bengal Public Health Laboratory during the year varied from 10 in Hooghly district to 658 and 770 in Noakhali and Nadia districts, respectively.

(h) The three circle Assistant Directors of Public Health inspected 81 rural health circles during the year, of these 51 were inspected by the Burdwan Assistant Director and of 16 places visited for epidemic 10 were attended by Burdwan Assistant Director of Public Health.

80. **District boards' income and expenditure.**—The total income of the 26 district boards with an aggregate population of 46,389,495 was Rs. 1,38,84,940 against Rs. 1,40,93,914 in 1929-30, the average income of each district board being Rs. 5,34,040 and that per head of population four annas and nine pies. The total receipts from all sources including the opening balance during the year were Rs. 17,955,002 against Rs. 1,83,87,843 in the previous year. There was thus a decrease of Rs. 2,08,974 or 1·4 per cent. in the total income and of Rs. 4,32,841

or 2·3 per cent. in the total receipts. The opening balance was Rs. 31,56,887 against Rs. 35,01,521 in the preceding year. The average incidence of taxation per head of population was four annas and eleven pies against three annas in the previous year. The total expenditure, excluding debts, amounted to Rs. 1,38,64,153 against Rs. 1,43,49,155 in the previous year, showing a reduction of Rs. 4,85,002 or 3·3 per cent. The following table shows the percentage proportion of expenditure on some of the main heads to total receipts:—

Heads.	Total expenditure, 1930-31.	Percentage proportion to the total receipts.		Increase + or decrease —.
		1929-30.	1930-31.	
	Rs.			
Communications	31,00,430	18·1	17·8	—0·3
Water-supply	6,76,110	4·1	3·7	—0·4
Buildings	4,02,623	2·4	2·2	—0·2
Drainage	19,545	0·1	0·1	±0
Sanitation	13,72,624	6·5	7·6	+1·1
Vaccination	2,61,575	1·6	1·4	—0·2

While 30·0 per cent. of the total receipts were expended on public works, only 7·6 per cent. or 5·6 pies were spent per head of population on sanitation and 1·4 per cent. or 1 pie on vaccination in the year under review against 6·5 per cent. or 5·3 pies and 1·6 per cent. or 1·3 pies, respectively, in the previous year.

81. **Village Self-Government: Union Boards.**—4,522 union boards worked during the year 1930-31 against 4,320 in the previous year. The total income from union rates levied under the Village Self-Government Act fell from Rs. 12 lakhs to Rs. 9 lakhs and the total receipts excluding opening balance from Rs. 85,23,000 to Rs. 82,10,000. The total expenditure which was Rs. 83,63,000 in the previous year amounted in the year under review to Rs. 85,18,000, of which Rs. 22,30,000 were spent on communications, public health, medical relief, water-supply and education against Rs. 24,69,000 in the preceding year, leaving a closing balance of Rs. 12,05,017. Approximately five and three-quarter lakhs were spent on roads, six and a quarter lakhs on water-supply, one and a half lakhs on drainage and conservancy, one and a quarter lakhs on dispensaries, and three and a third lakhs on schools. Most of the District boards took much interest in the working of the union boards and helped them with such grants-in-aid as they could spare. A number of union boards maintained dispensary services and improved the local water-supplies.

Chapter VII.

MALARIA.

82. **Krishnagar Malaria Research Laboratory.**—During the year under report, dissection of mosquitoes collected from dwelling houses in the villages as well as in Krishnagar town was continued. Excepting *A. philippinensis* no other species was found naturally infected. The sporozoite rate of this species in the different months were 3·6, 0·7, 3·4, 3·7, 2·2 and 1·2 in the months of July, August, September, October, November and December, respectively. Amongst the collections of mosquitoes from the town only *A. philippinensis* were found naturally infected. *A. stephensi* which breed in the wells of Krishnagar were not found infected naturally. By experimental feeding, 15 out of 58 *stephensi*, 10 out of 50 *fuliginosus*, one out of 11 *pallidus*, one out of 2 *A. ramsayii* and one out of 18 *A. sinensis* were successful in developing sporozoites. This was the first time that *A. ramsayii* could be infected in our laboratory.

83. **Sylee Malaria Research Laboratory.**—This laboratory is situated in the Jalpaiguri Dooars. From the surrounding tea gardens mosquitoes were collected and dissected. Out of the 18 species found only *A. minimus* were found naturally infected, the average percentage of infection rate of this species being 7·3. During the year the infection rate amongst the minimus was 4, 10, 6, 9 and 6 per cent. in the months of July, August, September, October and November, respectively.

Chapter VIII.

MATERNITY AND CHILD WELFARE.

84. **Dai training.**—The annual allotment of Rs. 15,000 for the training of dais was distributed during the year among 23 district boards and 30 municipalities. Particulars of the work done by them during the year have been included in the appended statement. The district board of Rajshahi and the Arambagh, Naihati, Bogra, Tangail and Raniganj Municipalities could not start the classes sanctioned for them. The district board of Mymensingh could start only one class although three classes were sanctioned for it. Each of the district boards of Malda and Bakarganj and the Chapra health welfare centre in the Nadia district started an additional class over and above the classes for which grants-in-aid were sanctioned for them. The total number of classes conducted for the training of dais during the year under review was 94, in which 1,074 pupil dais were trained by 96 lectures, all of whom are local registered medical practitioners. Seven hundred and ten certificates and 928 maternity outfits were distributed to the trained dai pupils. The maternity outfits were purchased and supplied by the Bengal Public Health Department.

Local bodies.					Govern- ment grant for 1931-32.	Classes started.	Dais trained.
<i>District Boards.</i>					Rs.		
1	Burdwan	..	..	..	285	3	28
2	Bankura	..	..	..	190	2	21
3	Midnapur	..	..	..	285	3	30
4	Hooghly	..	..	..	95	1	20
5	Howrah	..	..	..	570	6	58
6	24-Parganas	..	..	..	285	3	38
7	Nadia	..	..	..	190	2	23
8	Murshidabad	..	..	..	380	4	44
9	Jessore	..	..	..	380	4	40
10	Khulna	..	..	..	475	5	54
11	Rajshahi	..	..	..	190	No class could be started.	
12	Jalpaiguri	..	..	..	285		
13	Rangpur	..	..	..	190	2	21
14	Bogra	..	..	..	285	3	30
15	Pabna	..	..	..	285	3	35
16	Malda	..	..	..	285	4	51
17	Dacca	..	..	..	190	2	20
18	Mymensingh	..	..	..	285	1	11
19	Faridpur	..	..	..	285	3	79
20	Bakarganj	..	..	..	285	4	63
21	Chittagong	..	..	..	285	3	30
22	Noakhali	..	..	..	285	3	30
23	Tippera	..	..	..	285	3	30

Local bodies.				Government grant for 1931-32.	Classes started.	Dais trained.
<i>Municipalities.</i>						
24	Kalna	..	..	95	1	7
25	Suri	..	..	95	1	10
26	Tamluk	..	..	95	1	10
27	Hooghly-Chinsura	..	..	95	1	10
28	Arambagh	..	..	95	No class could be started.	
29	Serampur	..	..	95	1	16
30	Kotrung	..	..	95	1	12
31	South Dum-Dum	..	..	95	1	10
32	Tollyganj	..	..	95	1	8
33	Tittaghar	..	..	95	1	16
34	Naihati	..	..	95	No class could be started.	
35	Nator	..	..	95	1	10
36	Baduria	..	..	95	1	10
37	Krishnagar	..	..	95	1	10
38	Nabadwip	..	..	95	1	19
39	Ranaghat	..	..	95	1	10
40	Berhampur	..	..	95	1	5
41	Rajshahi	..	..	95	1	10
42	Bogra	..	..	95	No class could be started.	
43	Pabna	..	..	95	1	13
44	Old Malda	..	..	95	1	5
45	Mymensingh	..	..	95	1	10
46	Kishorganj	..	..	95	1	10
47	Tangail	..	..	95	No class could be started.	
48	Pirojpur	..	..	95	1	12
49	Comilla	..	..	95	1	10
50	Bally	..	..	95	1	10
51	Raniganj	..	..	95	No class could be started.	
52	South Suburban	..	..	95	1	8
53	Rajbari	..	..	95	1	11
54	Chapra Health Welfare centre	..	..	95	2	24
Total				9,500	94	1,074

Chapter IX.

SCHOOL HYGIENE AND MEDICAL INSPECTION OF SCHOOL CHILDREN.

85. **Annual report of school hygiene work in Bengal in 1931-32.**— During the period under review 195 boys' schools were visited by 41 medical officers who medically inspected 21,085 boys and also 817 girls in seven girls' schools were medically inspected. Last year 26 medical officers inspected 16,700 boys and 524 girls in 159 schools. Had the scheme of the Director of Public Instruction, Bengal, for medical inspection of scholars of Government schools in mufassal by subsidised school medical officers come into operation the medical inspection work would have increased still further. The whole-time school medical officer of Asansol Mines Board of Health visited 87 schools and medically examined 3,931 boys and 184 girls. The three Government school medical officers of Calcutta visited 29 Government and Government-aided schools and inspected 5,727 scholars medically as detailed below:—

				School medical officers.		
				Dr. Bose.	Dr. Ray.	Dr. Basak.
Schools visited in—						
1930	..	..	..	9	9	10
1931	..	..	..	7	9	13
Rolls of scholars in—						
1930	..	..	..	2,775	2,548	1,594
1931	..	..	..	2,066	2,554	2,700
Scholars—						
1930	..	..	..	1,624	2,190	1,913
1931	..	..	..	2,170	2,059	1,016
Days devoted—						
1930	..	..	..	155	163	40
1931	..	..	..	110	109	147
Average number examined per day—						
1930	..	..	..	16	23	13
1931	..	..	..	14	12	23

Nine private doctors attached to 12 private schools inspected 4,706 scholars medically as detailed below:—

Schools.			Scholars examined.
1.	Chetla High English School	..	765
2.	City Collegiate School	..	519
3.	Saradacharan Aryan School	..	75
4.	Sri Visudhananda Marwari	..	484
5.	Maharaja Cossimbazar Polytechnic	..	496
6.	Mitra Institution	..	970
7.	Scottish Churches	..	1,128
8.	Metropolitan Institution	..	263
9.	Prabodh Memorial School	..	444
10.	One Middle English School	..	444
11.	One Middle English School	..	444
12.	St. Barnabas' School	..	327
Total			4,706

All other doctors engaged in school medical inspection work, inspected less than 1,000 scholars each. The result of these inspections are tabulated with comments in the following sub-paragraphs. As the number of girls examined were few and full details were not recorded their number is excluded from all statements.

Physical condition.—Out of a total of 21,085 scholars, 5,060 or 23.8 per cent. were badly nourished against 24 per cent. last year.

Clothing.—Out of a total of 21,085 scholars, 4,950 or about 23.4 per cent. had very dirty and bad clothing against 24 per cent. last year.

Footwear.—7,249 or about 34 per cent. were bare-footed on the day of medical inspection as compared with 33 per cent. last year.

Height.—The average height of all scholars inspected at different ages compared favourably with the anthropometric standard as will be seen in the table given below:—

Ages.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19 and over.
Anthropometric standard height in inches ..	41	47	46	49	49.7	51	53	55	56	59	61	..	..	..	..
Average height of Bengali students in inches ..	39.5	43	44	48	49	50	51	53	55	58	59	64	65	66	66

Weight.—The average weight of all scholars inspected at different ages compared far less favourably with that shown on the anthropometric standard as will be evident from the figures given below:—

Ages.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Anthropometric standard weight in lbs.	39	42	46	52	55	62	68	76	87	96	100	..	..	..	..	..
Average weight of Bengali students in lbs. ..	33	37	41	46	54	55	59	66	76	85	90	99	104	106	110	120

Ages.—The age conditions of 19,803 boys were reported by medical officers. The following list shows the number of students of different ages examined:—

Ages.		Number of students.
4	..	13
5	..	340
6	..	801
7	..	1,145
8	..	1,581
9	..	1,805
10	..	1,999
11	..	2,220
12	..	2,197
13	..	1,867
14	..	1,902
15	..	1,530
16	..	1,158
17	..	643
18	..	413
19	..	114
Over	..	75
Total for all ages		19,803

Skin.—1,443 or about 6 per cent. were affected with some kind of skin disease or other. Most of these cases were suffering from ring-worm or scabies and were notified to their guardians.

Teeth.—2,356 or about 11·1 per cent. had carious teeth. Most of these cases were notified to their guardians for extraction. Dr. R. Ahmad, Principal of the Calcutta Dental College and Hospital at Bowbazar Street, extracted carious teeth of school students free of charge. About 100 students from different Calcutta schools took advantage of this arrangement.

Nose.—Five hundred and thirty-six or about 2 per cent. were suffering from some kind of nasal disease, mostly rhinitis.

Tonsils.—3,345 or about 11 per cent. were suffering from enlarged tonsils.

Adenoids.—Four hundred and forty-five or about 2 per cent. were suffering from adenoids.

Lymph glands.—1,440 or about 6 per cent. had their lymph glands enlarged.

Ear conditions.—Four hundred or about 1·9 per cent. had ear troubles which, in most cases, consisted of otorrhœa.

Vaccination.—Seven hundred and thirty-four or about 3 per cent. had no marks of vaccination on their bodies.

Heart.—One hundred and sixty-nine or about 0·75 per cent. had heart troubles and their conditions were notified to their guardians.

Lungs conditions.—Three hundred and twenty-two or about 1·5 per cent. were suffering from bronchitis. Besides these there were 29 boys who were suffering from tuberculosis of the lungs.

Enlarged spleen.—Nine hundred and fourteen or about 4·3 per cent. had enlargement of the spleen. Out of these 25 per cent. belonged to the city of Calcutta.

Rickets.—Forty-seven or about ·02 per cent. had rickets.

Deformity.—Fifty-one or about ·02 per cent. had deformities.

Paralysis.—Eight boys were found to have paralysis.

Speech.—Three hundred and eighty-two or about 1·7 per cent. had defective speech, chiefly stammering.

Malaria.—Five hundred and forty-eight or about 2 per cent. were either actually suffering from malaria during medical inspection or were convalescent from recent attacks of malarial fever. Out of the 548 scholars with malaria, 59 belonged to the city of Calcutta.

Dysentery.—One hundred and eighteen or about ·5 per cent. had either dysentery during medical inspection or were recently convalescent from it.

Other infectious diseases.—Thirty-one had measles, 9 diphtheria, 20 smallpox, 17 whooping cough and 18 had leprosy.

Eye troubles.—The number of scholars found to have eye troubles was 2,803 or about 13·2 per cent. The majority of them were suffering from defective vision, detected in the course of school medical

inspection work in different schools. Out of the total number 2,144 belonged to Calcutta. The refraction of students with defective vision was carried on by the Medical Inspector of Schools on Saturday afternoons in the refraction room of the Calcutta Medical College Eye Hospital with the permission of the Principal and the Ophthalmic Surgeon. Spectacles were supplied free of charge to deserving poor students on the recommendations of the headmasters of their schools. In this clinic during 1931-32 the refraction of about 550 students were determined with the following results:—

Total number examined	..	..	..	550
Total number supplied with glasses	..	..	..	69
Number of hypermetropes	..	..	..	22
Number of myopes	..	..	..	32
Number of hyperopic astigmatics	..	..	..	12
Number of myopic astigmatics	..	..	..	3
All other defects of vision examined	..	..	..	481

Total defectives.—The total number of students medically inspected by Government School Medical Officers of Calcutta was 5,727. Out of them 1,993 or 34·8 per cent. were defective students. For the whole of Bengal the total number of actually defective students is not available but among 21,085 students 5,715 or about 27 per cent. had so much defect as to require notification to their guardians.

Sanitary condition of institutions visited.—In the year under review 195 boys' schools were visited; out of these 35 had insufficient floor space, 24 were improperly ventilated, 22 were insufficiently lighted, 17 had no playground and 12 had neither privies nor urinals. In Asansol mining area, most of the primary schools had no buildings of their own.

Average vital capacity.—The average difference between expiration and inspiration is tabulated in inches below, age for age—

Ages.		Inches.		Ages.		Inches.	
5	1½	13	..	..	2
6	1½	14	..	..	2
7	1¾	15	..	..	2·2
8	1·8	16	..	..	2·1
9	1·9	17	..	..	2
10	2·4	18	..	..	2·3
11	2·5	19	..	..	2·1
12	2·3	20	..	..	2·1

The Assistant Director of Public Health, School Hygiene, examined 42 plans for educational institutions and reviewed one book on hygiene for the provincial Text Book Committee. The syllabus for girls in hygiene for secondary schools was rewritten. The School Hygiene branch also organised and supervised dai-training classes throughout Bengal which were inspected from time to time by the Medical Inspector of Schools in his tours. He visited about 100 schools for ascertaining the arrangements for the medical inspection of school children by the respective school authorities.

86. School Hygiene Work in Rural Health Circles.—During the year 1931-32 the school hygiene work in primary schools within the jurisdiction of the rural health circles increased further. As in last year the work was carried on by the sanitary inspectors in charge of these

circles under the supervision of the district health officers. The sanitary inspectors not being medically qualified could not carry out the work in its full detail. The particulars of the work done by them under various headings as far as reported by the district health officers are given below:—

Burdwan.—Sanitary inspectors of 14 health circles inspected 21 schools and examined 1,713 scholars and found out of them 133 to be unvaccinated, 283 with enlarged spleen, 82 suffering from skin diseases, 366 with poor nutrition and 5 having vermin infestation.

24-Parganas.—2,769 scholars were inspected in 105 schools, 552 vaccinations were done against smallpox and 340 inoculations were given against cholera among school children by sanitary inspectors.

Midnapur.—3,459 children were inspected by sanitary inspectors in 125 schools. They found 180 unvaccinated and 740 with enlarged spleen.

Bankura.—Sanitary inspectors attached to 16 health circles inspected 1,181 boys and 17 girls in 68 schools. Out of the scholars inspected 19 had defective vision, 99 skin disease, 31 infectious diseases, 135 carious teeth, 3 heart trouble, 406 bad clothing, 37 ear diseases, 546 bad nutrition and 30 speech defects. In this district no school except three had privies or urinals.

Khulna.—Sanitary inspectors of five health circles visited 61 schools and inspected 2,114 scholars and found 112 with enlarged spleen and 52 unvaccinated.

Jessore.—Two hundred and thirty-one schools were visited and 6,946 scholars inspected out of whom 199 were found to be unvaccinated and 3,137 to have enlarged spleen.

Nadia.—Seventy-two schools were visited and 2,522 scholars inspected out of whom 96 were found to be unvaccinated, and 1,710 had enlarged spleen.

Murshidabad.—Twenty-five schools were visited and 2,043 scholars were inspected out of whom 73 were unvaccinated, 799 had enlarged spleen and 49 vermin infestation.

Rajshahi.—Twenty-five sanitary inspectors each in charge of a health circle visited 69 schools and inspected 2,026 scholars out of whom 55 were unvaccinated, 1,353 had enlarged spleen, and 57 with vermin infestation.

Jalpaiguri.—Thirteen sanitary inspectors of 13 health circles visited 188 M. E. schools and inspected 1,361 scholars; out of whom 111 were found to be unvaccinated and 1,165 had enlarged spleen.

Rangpur.—Two hundred and sixty-four schools were visited and 7,204 scholars were inspected by sanitary inspectors. Out of them 953 were found to be unvaccinated but were subsequently vaccinated.

Bogra.—Twelve sanitary inspectors visited 80 schools and inspected 1,728 scholars out of whom 109 were unvaccinated, 530 had enlarged spleen, and 193 had vermin infestation.

Pabna.—Sixteen sanitary inspectors visited 83 schools and inspected 2,203 scholars, out of whom 751 were found to have enlarged spleen, 473 unvaccinated and 77 with vermin infestation.

Malda.—Two hundred schools were visited and 6,495 scholars were inspected, out of whom 45 were found to be unvaccinated and 1,939 had enlarged spleen.

Mymensingh.—Twenty-one sanitary inspectors visited 206 schools and inspected 7,350 scholars out of whom 1,810 were found to be unvaccinated, 670 with enlarged spleen and only 3 with vermin infestation.

Bakarganj.—Thirty sanitary inspectors visited 267 schools and inspected 3,695 scholars out of whom 116 were found to be unvaccinated, 20 with enlarged spleen and 13 with vermin infestation.

Chittagong.—Twenty sanitary inspectors visited 314 schools and inspected 8,931 scholars out of whom 218 were found to be unvaccinated, 1,860 with enlarged spleen and 274 with vermin infestation.

Ranaghat municipality.—Five schools were visited and 384 scholars were inspected out of whom 250 were found to have enlarged spleen.

Kalna municipality.—Two schools were visited and 46 scholars were inspected out of whom 4 were unvaccinated and all the students inspected had enlarged spleen.

South Dum-Dum municipality.—Three schools were visited and 26 scholars inspected and 1 only was found to be unvaccinated.

87. In the attached table the work of school medical inspection done by sanitary inspectors in the district board area and municipalities is shown:—

School hygiene work for 1931-32 by sanitary inspectors of municipalities and rural health circles.

Localities.	Health circles.	Schools.	Pupils inspected.	Un-vaccinated pupils.	En-larged spleen.	Skin diseases.	Mal-nutrition.	Vermin infestation.	Other defects.
<i>Districts.</i>									
Burdwan ..	14	21	1,713	1,335	283	82	366	8	..
24-Parganas ..	..	105	552	..	740	..	..	..	..
Midnapore ..	..	125	3,459	180	..	..	..	..	..
Bankura ..	16	68	1,198	..	..	99	546	..	225
Khulna ..	5	61	2,114	52	112	..	..	..	..
Jessore ..	..	231	6,946	199	3,137	..	..	..	..
Nadia ..	..	72	2,522	96	1,710	..	..	..	..
Murshidabad ..	..	25	2,043	73	799	..	..	49	..
Rajshahi ..	25	69	2,026	55	1,353	..	..	57	..
Jalpaiguri ..	13	188	1,361	111	1,165	..	..	..	..
Rangpur ..	..	264	7,204	953	..	..	..	..	..
Bogra ..	12	80	1,728	109	530	..	..	193	..
Pabna ..	16	83	2,203	473	751	..	..	77	..
Malda ..	..	200	6,495	45	1,939	..	..	..	..
Mymensingh ..	21	206	7,350	1,810	670	..	..	3	..
Bakarganj ..	30	267	3,695	116	20	..	..	13	..
<i>Municipalities.</i>									
Chittagong ..	20	314	8,931	218	1,860	..	..	274	..
Ranaghat ..	..	5	384	..	..	..	..	..	..
Kalna ..	..	2	46	4	250	..	..	..	..
South Dum-Dum ..	..	3	26	1	46	..	..	..	..

Chapter X.

HEALTH PROPAGANDA.

88. **Educational Propaganda and Publicity.**—The continued and unabated demand for officers and materials of this branch from all over the province is conclusive evidence of the increasing popularity of the publicity section. The indifference and callousness in matters of health and hygiene is now being rapidly replaced by the emergence of an educated community and enlightened public opinion in regard to better health conditions. The “sanitary conscience” having been once awakened, the need for still further progress is always in demand. Financial difficulties and trade depression have not deterred the people in organising health exhibitions whenever opportunities presented themselves. Health exhibitions were held in 165 places in which the publicity branch participated. Besides it has now become an unavoidable adjunct even of the industrial and agricultural shows in Bengal. So pressing and numerous are the demands that at times it appeared that even a tripling of the staff would not meet the requirements and very many calls had to be regretfully left unattended.

The publicity officer and his staff delivered 437 lectures during the year as compared with 426 in 1930. One hundred and eighty-six cinema shows were given with films which of these the Debdut film on maternity and child welfare produced by the publicity officer has been in great demand throughout India and reprints of this have been bought by other provinces. A film on tuberculosis has been the latest addition to the already existing stock of departmental films.

As in previous years a copious supply of leaflets, charts and posters have been supplied to the organisers of exhibitions. More than two and a half lakhs of leaflets and pamphlets on various preventible diseases were published in Bengali, Hindi, Urdu and English and several lakhs of these were distributed.

Chapter XI.

VACCINATION.

[This chapter and statistical tables shown in Appendix II refer to the period from 1st April 1931 to March 1932.]

89. The charge of the Vaccination and Vital Statistics branch was held by Dr. M. E. Sufi, Assistant Director of Public Health, till his retirement on the 15th August 1931, after which the post has been re-trenched and abolished.

90. **Strength of staff.**—The statement below shows the strength of the vaccination staff. Compared with the previous year the strength of the rural vaccination inspecting staff remained the same but the district board of Khulna having appointed one special inspector of vaccination, the total number of inspectors for the rural areas has actually increased from 79 to 80. In the mufassal municipalities their number increased from three to five. In Calcutta the number of inspectors and vaccinators remained constant. In the rural areas and the mufassal municipalities the number of vaccinators was further reduced during the year under report. The cause of this decrease has been attributed to the less prevalence of smallpox during the year.

Strength of Staff.

				1930-31.	1931-32.
Rural areas—					
Inspectors	..	..	..	79	80
Vaccinators	..	..	..	1,825	1,709
Mufassal municipalities—					
Inspectors	..	..	..	3	5
Vaccinators	..	..	..	174	154
Calcutta—					
Inspectors	..	..	..	18	18
Vaccinators	..	..	..	60	60

91. **General Vaccination Statistics (Vaccination Statement No. 1).**—The table below shows the details of vaccination. There has been an increase in the number of vaccinations under all headings, except

during the recess period when there has been a decrease in the total number of vaccinations by 193,436.

	1930-31.	1931-32.	Increase + or decrease —.
Total number of persons vaccinated ..	5,280,889	5,541,685	+260,796
Total number of vaccinations performed ..	5,281,445	5,542,600	+261,155
(a) Primary vaccinations	2,246,798	2,451,029	+204,231
Successful	2,077,031	2,228,149	+151,118
(b) Re-vaccinations	3,034,647	3,091,571	+56,924
Successful	1,532,644	1,509,850	—22,794
Average number of persons vaccinated by each vaccinator.	2,503	2,827	+324
Percentage of successful cases in which results were known—			
(a) Primary vaccinations	92·4	90·9	..
(b) Re-vaccinations	50·5	48·8	..
Ratio of successful vaccinations per mille of population.	77·3	74·6	..
Number of children successfully vaccinated—			
(a) Under one year	270,401	293,263	+22,862
(b) One year and under six years ..	1,426,795	1,494,412	+67,617
Total number of vaccination performed during recess.	920,873	727,437	—193,436
(a) Primary vaccinations	289,374	270,735	—18,639
(b) Re-vaccinations	631,499	456,702	—174,797

92. **Vaccination in rural areas (Vaccination Statement No. 1).—**
 (a) The total number of vaccinations in the rural areas 5,072,522 during 1931-32 was increased by 440,634 or 9·5 per cent., compared with the previous year the smallpox deaths were also comparatively less. It is satisfactory to note that the number of vaccinations increased in all districts except in Burdwan, Asansol Mining Settlement, Hooghly, Howrah, 24-Parganas, Jessore, Khulna, Darjeeling, Noakhali and in the Chittagong Hill Tracts and the number of deaths from smallpox decreased in all districts (except Rajshahi, Rangpur, Bogra, Mymensingh, Chittagong and Tippera). Out of 6,355 deaths from smallpox in the whole Presidency, Dacca and Mymensingh districts were alone responsible for 1,270 and 1,095 deaths, respectively. It may, however, be added that the district boards were alive to the occasion and performed during the year under review 324,575 and 779,531 vaccinations against 197,797 and 674,161 during the previous year.

Vaccination in Rural Areas.

Districts.	Vaccinations.		Differences.	Percentage of increase + or decrease —.	Smallpox deaths.		Increase + or decrease —.
	1930-31.	1931-32.			1930-31.	1931-32.	
Burdwan ..	89,899	76,136	—13,763	—15·3	454	251	—
Asansol Mining Settlement ..	56,678	46,802	—9,876	—17·4	15	11	—
Birbhum ..	90,695	93,225	+2,530	+2·8	188	175	—
Bankura ..	72,036	83,546	+11,510	+16	449	186	—
Midnapur ..	312,738	378,932	+66,194	+21·2	336	165	—
Hooghly ..	47,595	39,391	—8,204	—17·2	696	238	—
Howrah ..	53,738	51,037	—2,701	—5	1,034	284	—
24-Parganas ..	210,946	188,058	—22,898	—18·1	529	191	—
Nadia ..	96,633	106,963	+10,330	+10·7	137	40	—
Murshidabad ..	131,222	135,530	+4,308	+3·3	216	115	—
Jessore ..	328,980	276,293	—52,687	—16	172	24	—
Khulna ..	250,817	241,650	—9,167	—3·6	42	17	—
Rajshahi ..	78,701	85,756	+7,055	+9	11	18	+
Dinajpur ..	147,232	163,798	+16,566	+11·2	225	155	—
Jalpaiguri ..	71,701	91,638	+19,937	+27·8	24	23	—
Darjeeling ..	17,413	15,691	—1,722	—9·9	12	9	—
Rangpur ..	304,855	323,804	+18,949	+6·2	633	789	+
Bogra ..	93,478	127,392	+33,914	+36·3	51	59	+
Pabna ..	112,988	114,843	+1,855	+1·6	78	20	—
Malda ..	42,390	78,564	+36,174	+85·3	52	35	—
Dacca ..	197,797	324,575	+126,778	+64·1	1,899	1,270	—
Mymensingh ..	674,161	779,531	+105,370	+15·6	587	1,095	+
Faridpur ..	163,576	176,685	+13,109	+8	739	132	—
Bakarganj ..	211,168	213,810	+2,642	+1·2	122	34	—
Chittagong ..	127,296	181,823	+54,527	+42·8	345	386	+
Noakhali ..	228,671	227,267	—1,404	—·6	151	63	—
Tippera ..	404,484	436,417	+31,933	+7·9	556	570	+
Chittagong Hill Tracts	14,000	13,365	—635	—4·5	3	..	—
Total ..	4,631,888	5,072,522	+440,634	+9·5	9,756	6,355	—

(b) The increase in the total number of vaccinations referred to above was claimed by both primary vaccinations and re-vaccinations, 10·9 per cent. in the case of the former and 8·3 per cent. in that of the latter. Both the primary vaccinations and re-vaccinations were increased in Birbhum, Bankura, Midnapur, Nadia, Murshidabad, Rajshahi, Jalpaiguri, Bogra, Malda, Dacca, Mymensingh, Chittagong and Tippera. In the Asansol Mining Settlement, Howrah, Khulna, Darjeeling, Rangpur, Faridpur, Bakarganj and Chittagong Hill Tracts, while the number of primary vaccinations showed an excess, that of re-vaccinations was reduced. In Dinajpur, Pabna and Noakhali the reverse was the case.

Primary vaccinations and re-vaccinations performed district by district.

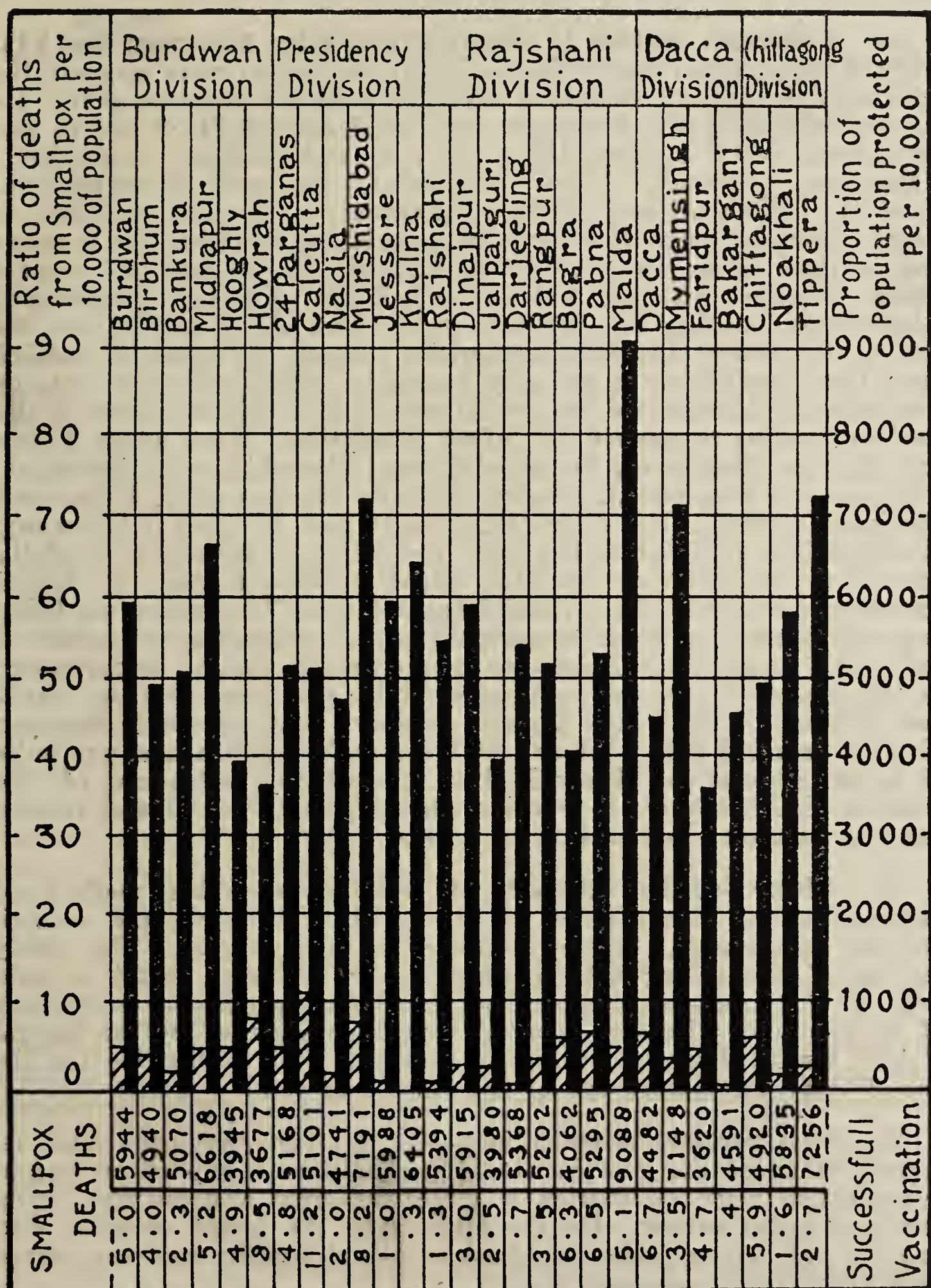
Districts.	Primary vaccinations.		Differ-ences.	Percen-tage of increase + or decrease —.	Re-vaccinations.		Differ-ences.	Percen-tage of increase + or decrease —.
	1930-31.	1931-32.			1930-31.	1931-32.		
Burdwan ..	47,914	45,921	—1,993	—4·2	41,985	30,215	—11,770	—28·0
Asansol Mining Settlement ..	14,840	15,886	+1,046	+7·0	41,838	30,916	—10,922	—26·1
Birbhum ..	40,777	41,691	+914	+2·2	49,918	51,534	+1,616	+3·2
Bankura ..	39,785	45,580	+5,795	+14·6	32,251	37,966	+5,715	+17·7
Midnapur ..	113,173	144,688	+31,515	+27·8	199,565	234,244	+34,679	+17·4
Hooghly ..	27,470	26,296	—1,174	—4·3	20,125	13,095	—7,030	—34·9
Howrah ..	26,389	27,830	+1,441	+5·4	27,349	23,207	—4,142	—15·2
24-Parganas ..	115,311	101,445	—13,866	—12·0	95,635	86,613	—9,022	—9·4
Nadia ..	55,226	58,739	+3,513	+6·4	41,407	48,224	+6,817	+16·4
Murshidabad ..	57,268	58,147	+879	+1·5	73,954	77,383	+3,429	+4·6
Jessore ..	91,833	77,990	—13,843	—15·1	237,147	198,303	—38,844	—16·4
Khulna ..	46,135	56,458	+10,323	+22·4	204,682	185,192	—19,490	—9·5
Rajshahi ..	40,531	43,023	+2,492	+6·1	38,160	42,733	+4,573	+12·0
Dinajpur ..	91,929	81,959	—9,970	—10·9	55,303	81,839	+26,536	+48·0
Jalpaiguri ..	26,292	31,134	+4,842	+18·4	45,409	60,504	+15,095	+33·2
Darjeeling ..	8,475	9,409	+934	+11·0	8,938	6,282	—2,656	—29·7
Rangpur ..	101,420	137,257	+35,837	+35·3	203,435	186,547	—16,888	—8·3
Bogra ..	46,442	65,132	+18,690	+40·2	47,036	62,260	+15,224	+32·3
Pabna ..	64,678	60,418	—4,260	—6·6	48,310	54,425	+6,115	+12·6
Malda ..	29,626	41,310	+11,684	+39·4	12,764	37,254	+24,490	+191·9
Dacca ..	107,625	174,252	+66,627	+61·9	90,162	150,323	+60,161	+66·7
Mymensingh ..	338,017	368,353	+30,336	+9·0	336,144	411,178	+75,034	+22·3
Faridpur ..	69,094	83,626	+14,532	+21·0	94,482	93,059	—1,423	—1·5
Bakarganj ..	160,136	163,936	+3,800	+2·4	51,032	49,874	—1,158	—2·3
Chittagong ..	67,930	86,696	+18,766	+27·6	59,366	95,127	+35,761	+60·2
Noakhali ..	103,362	100,635	—2,727	—2·6	125,309	126,632	+1,323	+1·1
Tippera ..	104,083	178,330	+74,247	+71·4	240,401	258,087	+17,686	+7·3
Chittagong Hill Tracts ..	8,341	8,453	+112	+1·3	5,659	4,912	—747	—13·2
Total ..	2,104,122	2,334,594	+230,472	+10·9	2,527,766	2,737,928	+210,162	+8·3


93. **Vaccination in municipalities (Vaccination Statement No. 1).—**The total number of vaccinations 364,556 in all the municipalities in 1931-32 showed a decrease of 159,132 operations or 30·3 per cent. against 523,688 performed in the previous year. Primary vaccinations were decreased by 17,467 and re-vaccinations by 141,665. In 47 municipalities out of 118 the number of vaccinations increased while in the rest it decreased. It has been noticed that 11 municipalities [Kharar, Khirpai, Kotrung, North Dum-Dum, Khardah, Gobardanga, Nator, Sherpur (Bogra), Malda, Bajitpur and Nalchiti] could perform only 92, 151, 113, 158, 191, 91, 105, 144, 34, 164 and 75 operations, respectively, during the whole year.

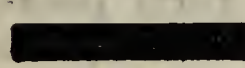
94. **Vaccinations performed by other agencies (Vaccination Statement No. 1).—**The total number of vaccinations performed by other agencies was reduced by 20,433. Both primary vaccinations as well as re-vaccinations were also reduced by 8,824 and 11,609, respectively. Jails showed an increase in re-vaccinations only.

Agencies.	Primary vaccinations.		Increase + or decrease —.	Re-vaccinations.		Increase + or decrease —.
	1930-31.	1931-32.		1930-31.	1931-32.	
Tea gardens ..	10,639	11,207	+	7,097	7,045	—
Factories ..	3,602	3,956	+	36,278	31,409	—
Railways ..	4,841	2,473	—	12,858	6,700	—
Steamers ..	..	..	..	1,480	576	—
Dispensaries ..	..	..	..	..	30	+
Jails ..	8,358	980	—	37,766	41,110	+
Total ..	27,440	18,616	—	98,479	86,870	—

95. Degree of protection afforded against smallpox during the 10 years 1922-23 to 1931-32 (Vaccination Statement No. V and the diagram).—Calcutta had the highest number of deaths, 11·2 per 10,000, Diagram illustrating death rates from smallpox and degree of protection afforded during 1922-23 to 1931-32.



 Indicate the death rates from Smallpox.

 Indicate the proportion of population protected by Vaccination.

and Khulna the lowest .3, with Bakarganj .4 and Darjeeling .7. The largest number of persons successfully vaccinated per 10,000 of population was registered in Malda (9,088), followed by Tippera (7,256), Murshidabad (7,191), Mymensingh (7,148), Midnapur (6,618). On the other hand Faridpur returned only 3,620, the lowest proportion.

96. **Protection afforded to infants (Vaccination Statement No. VI).**—265·9 per mille of the available infant population were successfully vaccinated in 1931-32 compared with 253·1 in the previous year. In the municipalities this proportion was 574·9 against 741·2 and in the rural areas 249·0 against 227·4. Kharar and Khirpai (Midnapur), Maheshpur (Jessore), Nator (Rajshahi), Bajitpur (Mymensingh), Nalchiti, Patuakhali and Bhola (Bakarganj) did not vaccinate a single infant although the surviving population available for vaccination in these towns was 66, 52, 36, 102, 103, 29, 94 and 129, respectively. Kharar, Khirpai, Nalchiti and Bhola did not vaccinate a single infant during the previous year. The wilful neglect on the part of the above municipal authorities compels me again to remind them that vaccination is the only means by which the worst type of a smallpox epidemic can be averted and it is a primary duty of the local authorities to protect the infant population. Then again Katwa and Dainhat (Burdwan), Jiaganj-Azinganj (Murshidabad), Ranaghat, Birnagar and Kumarkhali (Nadia), Baduria (24-Parganas), Pabna and Serajganj (Pabna), Kurseong (Darjeeling) and Pirojpur (Bakarganj) Municipalities recorded such a high proportion of infants successfully vaccinated per mille of available infant population that the figures submitted are improbable. Special Inspectors of Vaccination are being deputed to each of these municipalities to investigate the cause of such high proportion. Thirty-two municipalities showed improvement in this direction. In the rural areas Bakarganj stood last as usual and Malda returned the highest number. Faridpur and Rangpur districts recorded only 63·1 and 84·7 successful vaccinations per mille of infant population. I should like to draw the attention of the District Health Officers to Vaccination Statement No. VI and request them to improve the situation in future.

97. **Linear incision method of vaccination.**—This method of vaccination has been adopted by all the district boards and municipalities in Bengal, where it proved quite a success. The rotary method of vaccinating with a rotary lancet, although found superior even to the linear incision method, could not be adopted on account of its costliness. Lancets as usual have been supplied by the Bengal Public Health Department to the different local authorities for the use of their vaccinators and of the inspecting staff.

98. **Post vaccinal complications.**—As in the previous year no report either of the post vaccinal encephalitis or any other serious complication after vaccination was received from any district during the year under review. On the other hand the lymph supplied during the year under review has been of a high quality and has proved very satisfactory.

99. **Activities of the vaccination inspecting and the rural public health staff.**—The statement below shows the details of vaccination

performed by the vaccination inspectors and sub-inspectors and the sanitary inspectors of the rural public health staff:—

Statement showing the number of vaccinations performed by the Rural Public Health staff and the Vaccination Inspecting staff during 1931-32.

Districts.	Number of Assistant Health Officers and Sanitary Inspectors.	Number of operations performed by the Rural Public Health staff.			Average number of vaccinations performed by each.	Number of vaccination Inspectors and Sub-Inspectors.	Number of operations performed by the Vaccination Inspecting staff.			Average number of vaccinations performed by each.
		Primary vaccinations.	Re-vaccinations.	Total.			Primary vaccinations.	Re-vaccinations.	Total.	
1	2	3	4	5	6	7	8	9	10	11
Burdwan ..	16	7,390	8,679	16,069	1,004	2	309	251	560	280
Birbhum ..	14	5,323	11,858	17,181	1,227	2	239	313	552	276
Bankura ..	19	5,282	9,459	14,741	776	1	144	748	892	892
Midnapur ..	33	9,347	20,942	30,289	918	4	1,270	4,521	5,791	1,448
Hooghly ..	15	1,448	2,293	3,741	249	2	387	434	821	410
Howrah ..	10	759	2,192	2,951	295	1	592	139	731	731
24-Parganas ..	37	7,278	5,501	12,779	345	5	334	652	986	197
Nadia ..	25	4,914	17,052	21,966	879	5	407	1,694	2,101	420
Murshidabad ..	21	2,393	5,066	7,459	355	5	1,480	2,512	3,992	798
Jessore ..	24	953	3,209	4,162	173	2	28	227	255	127
Khulna ..	22	514	1,508	2,022	92	3	42	151	193	64
Rajshahi ..	25	2,850	3,879	6,729	269	3	125	304	429	143
Dinajpur ..	30	5,098	7,810	12,908	430	3	149	501	650	217
Jalpaiguri ..	17	1,314	1,868	3,182	187	1	134	427	561	561
Rangpur ..	30	3,185	5,606	8,791	293	2	127	222	349	174
Bogra ..	12	2,237	4,343	6,580	548	2	..	..	..	..
Pabna ..	17	21,479	27,548	49,027	2,884	2	365	472	837	418
Malda ..	18	2,700	902	3,602	200	2	93	222	315	157
Dacca ..	32	13,249	17,169	30,418	951	4	905	647	1,552	388
Mymensingh ..	51	22,823	35,203	58,026	1,138	6	3,201	3,730	6,931	1,155
Faridpur ..	25	3,056	3,391	6,447	258	4	525	1,597	2,122	530
Bakarganj ..	33	8,316	6,079	14,395	436	3	422	283	705	235
Chittagong ..	20	5,295	3,685	8,980	449	3	1,256	792	2,048	683
Noakhali ..	14	3,850	10,630	14,480	1,034	1	398	1,088	1,486	1,486
Tippera ..	20	2,470	6,073	8,543	427	3	1,929	4,272	6,201	2,067

The largest number of vaccinations performed by each member of the sanitary inspectors of the rural public health was 2,884 in Pabna. This was followed by Birbhum (1,227), Mymensingh (1,138), Noakhali (1,034) and Burdwan (1,004). In Khulna on the other hand only 92 operations were performed by them, Jessore (173), Jalpaiguri (187).

Faridpur (258), Rangpur (293) and Howrah (295) go to show that full advantage was not taken of these officers by these District Health Officers. On the side of the vaccination inspecting staff each individual member of the districts of Tippera, Noakhali, Midnapur and Mymensingh performed 2,067, 1,486, 1,448 and 1,155 operations, respectively. The vaccination inspecting staff of Khulna, Jessore, Rangpur and the 24-Parganas vaccinated only 64, 127, 174 and 197 cases, respectively.

100. **Inspections (Vaccination Statement No. IV).**—Compared with the previous year, every inspecting agency inspected a larger percentage of vaccinations performed. The percentage of success was less than that in the previous year in all cases, except in the case of the municipalities where in both primary and re-vaccinations the percentage of cases found successful to the total number inspected was higher than that of the previous year. No inspection was made by the District Health Officer of Bogra. The number of inspections made by the District Health Officers of Birbhum, Midnapur, 24-Parganas, Nadia, Murshidabad, Jessore, Khulna, Pabna, Dacca and Bakarganj are less than 1,000. Vaccination statement No. IV gives details of these inspections for every district by the several agencies.

Inspecting Officers.	Percentage of inspections to total number of vaccinations.			
	Primary vaccinations.		Re-vaccinations.	
	1930-31.	1931-32.	1930-31.	1931-32.
1. District Health Officers and Civil Surgeons of Darjeeling and Chittagong Hill Tracts	1·9	2·3	·8	1·9
2. Rural Assistant Health Officers and Sanitary Inspectors and Vaccination Inspecting staff	31·8	28·6	16·4	16·03
3. Municipal Superintendents and Assistant Superintendents of vaccination ..	2·4	1·7	4·5	2·7

Inspecting Officers.	Percentage of cases found successful to total number inspected.				Percentage of success reported by vaccinators.	
	Primary vaccinations.		Re-vaccinations.			
	1930-31.	1931-32.	1930-31.	1931-32.	1930-31.	1931-32.
1. District Health Officers and Civil Surgeons of Darjeeling and Chittagong Hill Tracts ..	96·9	93·2	68·8	64·1		
2. Rural Assistant Health Officers and Sanitary Inspectors and Vaccination Inspecting staff ..	93·8	93·5	60·9	57·7		
3. Municipal Superintendents and Assistant Superintendents of vaccination	86·1	95·3	31·9	36·2		
			Primary vaccinations ..		92·4	90·9
			Re-vaccinations..		90·5	48·8

101. **Cost of vaccination (Vaccination Statement No. 11).**—The total cost of vaccination in 1931-32, Rs. 4,74,355-1-11, was reduced by Rs. 9,811-3-8 compared with Rs. 4,84,166-5-7 in the previous year. This reduction was common to all the heads of expenditure.

Cost of vaccination, 1931-32.

Authorities.	Pay of establishment including vaccination inspecting staff, vaccinators and probationers.	Travelling allowance.	Contingencies.	Miscellaneous.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.
District Boards ..	2,22,848 12 10	32,246 2 3	10,564 6 0	2,036	2,67,695 5 1
Municipalities ..	1,20,164 9 3	3,423 15 6	4,981 8 0	..	1,28,570 0 9
Provincial Vaccine Depot ..	15,674 1 0	45 0 0	40,467 8 1	..	56,186 9 1
Calcutta Corporation Vaccine Depot ..	6,070 0 0	..	4,100 0 0	..	10,170 0 0
Vaccination Bureau ..	10,557 13 0	1,175 6 0	..	..	11,733 3 0
Total ..	3,75,315 4 1	36,890 7 9	60,113 6 1	2,036	4,74 355 1 11

Rupees 1,75,231-0-1 were paid from the provincial fund, Rs. 1,60,437-3-1 from the district fund and Rs. 1,38,686-14-9 from the municipal fund against Rs. 1,90,413-4-7, Rs. 1,56,417-7-6 and Rs. 1,37,335-9-6, respectively, in 1930-31. It thus appears that the contribution under all heads shows a slight increase. Twelve out of the twenty-seven district boards have curtailed their expenditure on vaccination during the year under review.

District boards' contribution on vaccination.

District boards.	Contribution on vaccination.		
	1930-31.	1931-32.	Difference.
	Rs.	Rs.	Rs.
Birbhum	1,954	1,635	319
Bankura	4,384	2,703	1,681
Midnapur	8,971	7,655	1,316
Hooghly	2,581	2,466	115
Howrah	5,135	3,591	1,544
Murshidabad	9,961	8,346	1,615
Jessore	8,678	6,515	2,163
Rajshahi	6,484	6,267	217
Pabna	5,165	3,963	1,202
Malda	2,752	2,016	736
Dacca	5,123	3,805	1,318
Chittagong	4,928	3,306	1,622

The average cost of each successful vaccination was annas two only during the year under report as against annas two pie one during the

previous year. It varied from seven pies in Dacca and Tippera districts to annas nine pies eleven in Darjeeling district and from anna one pies ten only in Patuakhali municipality to Rs. 2-10-6 in Nator Municipality.

102. **Bengal Vaccine Depot.**—3,278 calves were vaccinated during the year 1931-32 against 3,410 and 3,021 respectively during the two previous years. Out of a total of 3,312 vaccinated calves (including 34 of the preceding year), pulp was collected from 3,030 calves (cow-calves 2,990 and buffalo calves 40), 248 calves were discharged before collection, as the vesicles and pulp were of inferior quality and did not come up to the standard. The average yield of pulp this year has been 290.95 grains per calf as against 211.86 and 254.55. The total output of lymph during the year under review was 5,718,130 grains against 5,057,180 and 4,720,960 of the two preceding years. It thus appears that with the minimum number of calves there has been the maximum output of lymph with a degree of potency and bacteriological purity as high as possible. This quantity along with 1,655,227 grains, the balance of the previous year, made up an aggregate of 7,382,927 grains out of which 3,901,976 grains were issued, leaving a balance of 3,480,953 grains of first quality tested lymph. The lymph has to undergo several rigid tests before it leaves our hands. It is tested aerobically as well as anaerobically. This year lymph to the value of Rs. 6,280 was sold as against Rs. 8,177 and Rs. 11,318 of the two previous years. The total expenditure including overhead charges for supervision, etc., was Rs. 56,186 against Rs. 59,315 and Rs. 59,482 during the two preceding years. Dr. M. K. Chakravarti made over charge of his duties as Superintendent of the Bengal Vaccine Depot to Dr. A. Majed on the 1st April 1931 when he took six months' leave prior to retirement.

Chapter XII.

OTHER PUBLIC HEALTH SERVICES.

A.—Industrial Hygiene.

103. **Septic Tank Latrines.**—Plans of septic tank latrines and activated sludge plants approved by the Bengal Public Health Department during the year 1931 were—

(a) Septic tank latrines—

- (1) Hooghly Flour Mills.
- (2) Jossop & Co., Dum-Dum, Wagon Works.
- (3) Jossop & Co., Dum-Dum, Mechanical Works.
- (4) Jossop & Co., Dum-Dum, Beam Yard.
- (5) Bowreah Cotton Mills.
- (6) Lillooah Workshop, Store Department.

(b) Aerobic plants—

- (7) Activated sludge plant at Lillooah Workshop.

The number of plans approved in 1931 was 7 against 11 in 1930. The fall was due to the general trade depression during the year.

Number of visits, samples of effluents and action taken.—The number of inspections were 336 against 299 in 1930 and 254 in 1929. During the year, 1,826 samples of effluent were taken to the Bengal Public Health Laboratory for analysis including 624 for bacteriological and 1,202 for chemical examination against 1,656 in 1930. Leaving out the bacteriological samples collected from the Tittagarh Sewage Works, 191 samples out of 439 samples or 39 per cent. were found unsatisfactory on bacteriological examination and 61 per cent. were found sterilised on treatment with chloride of lime or like disinfectants.

Tittagarh Sewage Works.—Periodical samples have been collected and sent to the Public Health Laboratory for chemical and bacteriological examination. The quality of the effluent has been satisfactory chemically but the bacteriological standard of purity has not been reached. Simplex activated sludge plant is being used and the three units have been working together to cope with the increased amount of sewage treated at the works.

Health Propaganda Work.—As in 1930, mill managers have been advised to carry on health propaganda work and to utilise the help given by the department through the Publicity Branch. In several mills, health films have been shown in cinema shows, magic lantern lectures on sanitation arranged and suitable hygienic notices exhibited in latrines and urinating places. In most mills, popular talks on hygiene are given by their sanitary inspectors who are mainly responsible for carrying out the successful working of the septic tank

installations and the practical measures for sanitation. Sanitary inspectors should preferably be employed in mills, where they have not yet been employed. It is reported that the open surface drains were often used for latrine purposes and even in big mills the urinals were used as latrines, mostly by children, the worst offending places being the urinals meant for women. These surface washings, containing faecal matter, get mixed up with the sterilised filtered septic tank effluents and are finally discharged mostly into the river. Thus the final septic tank effluent, though innocuous by proper treatment, gets grossly polluted by this direct contamination of the untreated faecal matters; and it is no uncommon thing to see faecal matter in uncovered masonry drains at the outfall in the watercourse. The same thing may be seen in the open municipal drains and also in the open drains of mills and factories who use the conservancy system and do not employ the septic tank or any sewerage system.

Nuisances.—For removal of unsatisfactory conditions and defects, the mill authorities were advised through the Chief Inspector of Factories in 23 cases during the year. Besides, authorities concerned in the King George's Docks, Bengal Nagpur Railway head office, were advised direct for removal of defects.

Improvements.—A more liberal seating ratio for females in all kinds of latrines in place of hand service latrines only has been provided by the amendment of sections 33 and 34 of the Bengal Factories Rules made under the Indian Factories Act. New dosing chambers for sterilisation of effluents have been constructed, when they were not in use and improvements suggested and carried out for better chlorination in others. Automatic trough system of flushing has been provided in place of the rickety and disordered pedal flushes in a few septic tank installations. Cleansing of septic tanks from deposit of excess sludge, filling in and attention to filter beds when necessary were advised and carried out. Masonry tanks on the top of which workers sit to cleanse themselves for toilet after defæcation and thus grossly pollute the water, have been pulled down in several cases and filtered or deep tube-well water pipe line with suitable taps provided instead.

The Public Health form No. 22 (new) has been amended and has been in use during the year by all mills employing septic tank installations, with a view to gather further information and to check their capacity and the sufficiency of flushing, filtering and sterilising arrangements.

B.—Mines (Asansol Mines Board of Health).

104. **Meteorology and economic conditions.**—The total rainfall during the year was 57.34 inches against the annual average of 53 inches. Owing to sufficient rainfall the average outturn of crops was satisfactory.

Vital statistics (including population).—According to the recent census of 1931, the total population of the mining settlement was 382,680, of which 209,544 were male and 173,136 female against 329,353, 176,814 and 152,539, respectively, during the previous census of 1921, showing an increase of 16.2 per cent. in the total population. 10,645 births with a birth rate of 28 per 1,000 of population were registered in 1931 against 8,032 and a rate of 24 per mille in 1930, showing an increase of 2,613 births over that of the preceding year. There were

altogether 7,793 deaths during the year from all causes against 6,980 in the previous year. Altogether 18,438 entries of which 10,645 births and 7,793 deaths were examined in thanas by the board's staff and the omissions detected by them were reconciled.

Infantile mortality.—1,430 infants under one year died during the year under review against 1,038 in 1930 showing a rate of 135 against 129 per 1,000 births.

Epidemic diseases.—There was no severe outbreak of cholera or smallpox during the year. Altogether 620 cases of cholera with 309 deaths were reported against 453 cases with 207 deaths during the previous year. The death rate per 1,000 of population was 0·8 while the fatality rate was 49·0 per cent. The spread of the disease was checked by various routine measures of disinfection carried out by the board's staff. Ninety-four cases of smallpox with 8 deaths were reported during the year against 170 cases with 20 deaths in the previous year, the death rate being 0·02 per mille of population against 0·06 in 1930. Seven deaths from influenza were reported during the year. There were 636 deaths from pneumonia and 68 from phthisis during the year against 847 and 65, respectively, in 1930. No case of plague was reported in the year under review.

Malaria.—Altogether 188 deaths from malaria were reported during the year, of which 69 deaths took place in the colliery area of the mining settlement. Fevers of all kinds took a toll of 2,842 deaths against 1,694 during the previous year. A large proportion of these deaths is supposed to be due to malaria, besides those reported under the latter head. This indicates that malaria has been on increase since the last few years. Malaria survey was done in selected areas of the settlement and anti-malaria work was carried out in one area only during the year under report.

Vaccination.—14,975 primary and 48,410 revaccinations were performed during 1931 against 16,925 and 14,520 respectively, in 1930.

Maternity and child welfare.—A staff of midwives was maintained by the board to render gratuitous assistance to the married women of the settlement. They also acted as health visitors going from house to house and delivering simple lectures to the womenfolk on the principles of domestic hygiene and cleanliness. Training of indigenous dais in the elementary principles of antiseptic midwifery was also undertaken by them.

School hygiene and medical inspection of school children.—The medical inspection of the school children was regularly carried on by the school medical officer employed by the board.

C.—Public Analyst.

105. **(1) (i) Bengal Public Health Laboratory.**—(a) *Chemical Section.*—1,725 samples of water (including 1,595 routine and 130 specials), 1,221 of septic tank effluents (including 1,126 routine and 95 specials), 9 minerals and 3 miscellaneous along with 349 (special research) or a total of 3,307 samples were chemically examined against 3,306 samples in the previous year.

(b) *Bacteriological Section.*—3,173 samples of water, 1,236 samples of effluents from septic tanks, 175 vaccine lymph, 426 of rats, 9 disinfectants and 48 miscellaneous, making up an aggregate 5,067, were examined bacteriologically against 5,557 in 1930.

(c) *Food Section*.—3,238 samples of food were examined during the year, the result of analysis of those received from district boards and municipalities being as follows:—

Articles.	District boards.		Municipalities.	
	Number analysed.	Ratio per cent. found adulterated.	Number analysed.	Ratio per cent. found adulterated.
<i>Ghee</i>	238	50·8	355	32·2
Mustard oil	1,492	56·0	480	44·1
Milk	45	77·7	102	63·7
Wheat flour .. ..	..	..	64	Nil
<i>Atta</i>	43	2·3	..	..
Tea	2	Nil	28	35·7
Butter	1	100	10	10·0
<i>Dahi</i>	8	100	25	59·6
<i>Chhana</i>	3	Nil	2	Nil
Total	1,832	54·7	1,066	30·9

Of the 456 samples of milk received from the School of Tropical Medicine only 2 as in the previous year were found adulterated. Of the samples examined other than those examined under the Bengal Food Adulteration Act, the ratio of adulteration per cent. was 29·5 for *ghee*, 4·7 for milk and all the thirteen mustard oil samples received from this source were found genuine.

Although the Bengal Food Adulteration Act has been extended to all the urban and rural areas, only four of the district boards, Rangpur, Khulna, Jessore and Rajshahi, have so far opened public health laboratories of their own. Altogether 16 out of 18 district boards and 37 out of 90 municipalities supplied samples for analysis at this laboratory. In the rural areas over 75 per cent. of milk, over 50 per cent. of mustard oil and over 50 per cent. of *ghee* were adulterated. Whereas in the municipalities 63·7 per cent. of milk, 41·4 per cent. of mustard oil, 32·1 per cent. of *ghee* were adulterated. It is noticed that although the adulteration of food articles is increasing, effective action is not being taken by the local bodies under the Bengal Food Adulteration Act.

(d) *Research*.—(1) Vitamin value of the food fats of Bengal, a preliminary study.—An experiment was carried out on 7 rats of the same litter starting on 23rd July when they were 9 weeks old. The food that was given them consisted of casein, starch, fat, salt mixture and yeast, practically as prescribed by Drummond and Coward. Regarding the fat, two got butter fat (fat melted out of butter on water-bath) throughout. Five were depleted of vitamin A on lard for 22 days; then one got butter fat, two *ghee*, two mustard oil.

Of the two rats on butter fat throughout, both, weighing 50 grammes at the beginning, grew normal, the male weighing 140 grammes and the female 160 grammes on the 5th September, the female giving birth to 9 young ones the next day; they weighed 160 and 130 grammes respectively when disposed of at the end of the month. Of the depleted rats,

the one which got butter fat from the 15th August had dropped from 75 grammes to 50 grammes in course of the week ending that day, having had severe xerophthalmia with a small ulcer in the left cornea and rough denuded coat; it improved rapidly, the xerophthalmia disappeared, the corneal ulcer healed up, the fur became practically normal, the weight rose from 50 grammes of the 15th August to 85 grammes on the 5th September, i.e., an increase of 70 per cent. in three weeks. From this time, however, this rat as well as the two on butter fat throughout got diarrhoea and while the latter two recovered, it succumbed, dying on the 23rd September while still weighing 65 grammes without lapsing back into xerophthalmia. The other four depleted rats all lost weight and died, those on mustard oil on the 28th August and 18th September and those on *ghee* on 15th September and 2nd October, the symptoms of avitamosis specially xerophthalmia were very much pronounced in those on *ghee*, ending in ulceration of the cornea and total blindness; they were much less marked in those on mustard oil, death in the latter two being rather sudden.

(2) Bromine in detection of adulteration of mustard oil.—Linseed oil is a fairly frequent adulterant of mustard oil. Bromine is a reliable test for it, the ether insoluble hexabromide it forms being characteristic, but the existing methods are all complicated. By taking 1 c.c. of the oil in a long test tube, dissolving it in 40 c.c. of ether, acidulating the ether with 5 c.c. of glacial acetic acid, immersing the tube in ice-cooled water and adding bromine drop by drop while agitating with a glass stirrer, it was found that the precipitate settling down in thickness which is proportional to the quantity of the linolenic acid present in the oil. On decanting and washing with cold ether, the powdery white deposit was found to have a melting point of 141° - 142° C., being the hexabromide of linolodilinolenin.

(3) Food value of *kesur*.—*Kesur* grows wild in many parts of India. It is edible and on cultivation promises large yield. On analysis it was found to be equal in value in proximate principles to potatoes and particularly rich in minerals, 400 grammes giving 50 per cent. more than the average daily requirement of iron, 25 per cent. of the phosphate and 14 per cent. of the lime.

Among the other works the following may be mentioned:—

(1) Constants of buffalo *ghee*.—This is a continuation of the work on cow *ghee* that was published by Dr. Brahmachari in the *Indian Medical Gazette*. Fifty samples of *ghee* were prepared separately from milk of 50 buffaloes and were analysed in this laboratory for refractometer reading, Reichert Wollny value, saponification value and iodine value. The paper is not yet ready.

(2) Conductivity of water treated by catadyn and its relation to the bacterial purification of the water by it.—The work is on the line done on catadyn by Dr. Fowler. It is still in progress.

(ii) Dacca Branch Public Health Laboratory.—(a) *Water analysis*.—308 samples of water (including 286 routine), six from the different jails and sixteen from other bodies, were examined chemically and 888 (including 738 routine), 12 from jails, 122 special samples and 16 from other bodies were examined bacteriologically in 1931 against 160 and 428, respectively, in 1930.

(b) The total number of samples of sewage from the Dacca sewage works examined chemically in 1931 was 308 against 280 in 1930. None was examined bacteriologically.

(c) *Food-stuffs*.—3,221 samples of food-stuffs were examined in 1931 against 1,888 in 1930, out of which certificates for 2,681 samples were issued. 1,776 of the samples were received from district boards, 903 from municipalities and 2 from private bodies, the percentage of adulteration detected being 70·0, 37·0 and 50·0, respectively. The results of the analysis of the samples of the various food-stuffs was as follows:—

Articles.			Total number.	Adul- terated samples.	Percentage of adul- terated samples.
<i>Ghee</i>	..	..	274	104	38
Mustard oil	..	..	1,612	1,038	64
Milk	..	..	681	373	55
Tea	..	..	9	Nil	Nil
Wheat flour and <i>atta</i>	..	..	46	1	2
Butter	..	..	5	3	60
<i>Dahi</i>	..	..	54	45	83

Samples were received from all the 7 district boards and 14 out of 26 municipalities within the jurisdiction of the laboratory. The results of analysis is shown below—

			Total samples.	Adul- terated samples.	Percentage of adul- terated samples.
District boards.					
Noakhali	..	..	740	469	63
Faridpur	..	..	476	324	68
Tippera	..	..	176	140	80
Bakarganj	..	..	161	131	81
Mymensingh	..	..	92	66	72
Dacca	..	..	79	60	77
Chittagong	..	..	52	44	85
Municipalities.					
Dacca	..	..	612	182	30
Chittagong	..	..	83	27	33
Jhalakati	..	..	60	43	72
Chandpur	..	..	34	24	71
Faridpur	..	..	28	4	14
Jamalpur	..	..	21	13	62
Madaripur	..	..	17	12	71
Narayanganj	..	..	15	7	47
Rajbari	..	..	13	5	39
Barisal	..	..	8	5	63
Netrakona	..	..	5	3	60
Nalchiti	..	..	4	3	75
Pirojpur	..	..	2	Nil	Nil
Tangail	..	..	1	1	100

Thirteen samples of alum, bleaching powder and perchloron were also examined in 1931.

106. **(2) Bengal Excise Laboratory.**—6,646 samples received from the Excise and Police Departments were examined at the Bengal Excise Laboratory during the year 1931 against 7,263 in the previous year. The following table shows the samples in detail:—

Description of samples.					Number of samples examined during the year 1931.
1.	Medicinal preparations (for assay of alcoholic strength)	..			5,712
2.	Toilet preparations (for assay of alcoholic strength)	..			14
3.	<i>Pachwai</i> (for assay of spirit strength and detection of poison and adulteration)	..	..	..	5
4.	<i>Bakhar</i>	..	..	..	3
5.	Brandy, beer, gin and medicated wines	..			16
6.	Water (for testing suitability for reduction of spirit)	..			23
7.	Instruments—				
	Thermometers	..	..	..	46
	Glass hydrometers	..	..	..	112
	Brass hydrometers	..	..	..	6
	Brass saccharometers	..	..	..	10
	Glass saccharometers	..	..	..	4
				—	178
8.	Distillery—				
	Plain spirit	..	..	..	49
	Denatured spirit	..	..	..	2
	Rectified spirit	..	..	..	16
	<i>Mohua</i>	..	..	..	13
	Molasses	..	..	..	23
	Wash	..	..	..	64
	Spent lees	..	..	..	4
	Water	..	..	..	8
	Whisky	..	..	..	9
	Brandy	..	..	..	18
	Rum	..	..	..	36
	Essence of brandy and whisky	..	..	..	4
	Yeast	..	..	..	7
	Gin	..	..	..	4
	Caramel	..	..	..	1
				—	258
9.	Salt	..	..	..	3
10.	Miscellaneous	..	..	..	1
11.	Court case samples of liquor, <i>bakhar</i> and fermented wash, etc.	..	..	..	433
					—
	Total	..			6,646

About ninety per cent. of the court case samples were found to be of illicit origin.

107. **(3) Bengal Vaccine Laboratory.**—The following statements show the monthly productions and issues (free and sale) of anti-cholera vaccine during the year 1931. No vaccine was purchased either from Kasauli or from foreign countries. Three hundred thousand tubed doses of the vaccine were kept ready packed in the cold storage of the Light Foot Refrigerator Company.

Anti-cholera vaccine produced during the year 1931.

Months.				Cubic centimeters.
January	..	..	..	88,500
February	..	..	..	298,500
March ..	..	..	..	228,000
April ..	..	..	..	115,000
May ..	..	..	..	44,000
June ..	..	..	..	59,000
July ..	..	..	..	195,000
August	..	..	..	Nil
September	..	..	..	Nil
October	..	..	..	Nil
November	..	..	..	40,000
December	..	..	..	114,000
Total				1,182,000

Anti-cholera vaccine issued month by month during 1931.

Months.				Free supply (cubic centi- metres).	Supplied on payment (cubic centi- metres).	Total (cubic centi- metres).
January	..	..	..	339,945	7,700	347,645
February	..	..	..	109,850	1,740	111,590
March	..	..	..	271,835	1,140	272,975
April ..	..	..	..	229,890	560	230,450
May ..	..	..	..	66,315	1,050	67,365
June ..	..	..	..	17,120	4,610	21,730
July ..	..	..	..	20,080	Nil	20,080
August ..	..	..	..	69,100	50	69,150
September	..	..	..	124,000	Nil	124,000
October ..	..	..	..	217,900	1,540	219,440
November	..	..	..	462,280	2,000	464,280
December	..	..	..	436,420	10,280	446,700
Total				2,364,735	30,670	2,395,405

108. **(4) Darjeeling Municipal Laboratory.**—(i) *Water analysis.*—64 samples were examined chemically and 398 bacteriologically against 55 and 307 respectively in the previous year.

(ii) *Sewage effluents.*—120 samples were examined chemically against 105 in 1930.

(iii) *Food-stuffs.*—667 samples of food articles were examined with the following results:—

Articles.					Total examined.	Ratio per cent. of samples adulterated.
Milk	..	..	..	..	485	3·9
Butter	..	..	..	..	24	20·8
Ghee	..	..	..	..	49	Nil
Mustard oil	..	..	..	..	97	11·8
Atta	..	..	..	..	5	Nil
Flour	..	..	..	..	7	Nil

(iv) *Clinical work.*—399 samples, of urine 88, blood 108, stool 105, sputum 12, throat swab 73, pus 6 and auto-vaccine preparation 7, were examined chemically against 806 in the previous year. The drop is due to the establishment of a separate laboratory for this work in the tea gardens.

D.—Port Health Administration (Sanitation in the Ports of Calcutta and Chittagong).

109. **(a) Port of Calcutta.**—(i) *Inspection of vessels.*—During the year 1931 the town and the port of Calcutta were free from plague and hence no routine disinfection was enforced of clothing and bedding of Asiatic and African crew and of third class deck passengers of ships leaving for any port beyond British India. 14,876 European and 64,865 Asiatic seamen were inspected on inward bound vessels and 20,258 and 88,019, respectively, on outward bound vessels. The corresponding figures for 1930 were 21,582, 92,387, 23,118 and 94,175. 7,638 boats, lighters, etc., were also inspected. There were 71 cases of sickness in the harbour against 66 in the previous year.

(ii) *Public Health—European.*—During the year 1931, 19,420 European seamen arrived in this port as compared with 21,626 in the previous year. There were three deaths reported in hospitals. The admission rate to hospitals for all causes calculated on arrivals was 27·75 per mille. The death rate was ·15 per mille against ·36 of the previous year.

(iii) *Public Health—Asiatic.*—The total number of deaths reported by the police during the year 1931 was 68 against 168 in the previous year. There were 5 deaths from cholera, 44 deaths from fever and 19 deaths from bowel complaint.

(iv) *Infectious diseases.*—In the year 1931, four ships with infectious disease on board arrived in this port. Report of a death from pneumonia during voyage was also received from each of the two incoming steamers

“Arankola” and “Manipur.” The patients were as usual removed to hospital and necessary precautionary measures were taken. No case of infectious disease was reported to have occurred on undecked native seagoing craft. No case of sleeping sickness was found on any vessel coming from the East African ports nor was any alien leper found to have entered the country through the port of Calcutta.

(v) *Damaged food-stuffs*.—Nine samples of suspected *ghee* used as ration for lascar crew were collected and sent to the Bengal Public Health Laboratory for examination. Most of them were found to be of inferior quality and much below the standard laid down by the Government of India. The agents of the ships concerned were advised to replace the condemned stock by pure *ghee* which they did at the earliest opportunity.

(vi) *Disinfection and fumigation*.—During the year 1931, 20 sea-going vessels, 22 inland steamers, flats and launches and 24 lighters, *bhars* and *dinghis* were disinfected and 59 sea-going vessels were fumigated with the Clayton apparatus.

(vii) *Examination of rats for plague*.—Four hundred and eighteen rats trapped in this port were examined at the Bengal Public Health Department Laboratory during the year 1931. None of them was found to be infected with plague. Eight thousand three hundred and twenty-three rats are reported to have been killed by the Port Commissioners' staff within the docks and the jetties.

(viii) *Vaccination*.—At the request of the shipping agents, 554 deck passengers of 48 ships proceeding to the Straits were vaccinated by this department during the year 1931. A fee of annas 6 for each person vaccinated was charged to cover the cost of vaccination and the money realised was paid into the floating treasury. About 50 persons of the floating population of the port were also vaccinated free of charge.

110. **(b) Port of Chittagong.**—(i) *General sanitation*.—There were no outbreaks of cholera or plague in any vessels lying in the port in 1931. Three cases of measles and one case of smallpox broke out in three vessels lying in port. The patients were sent to hospitals and the vessels were thoroughly disinfected and fumigated. Necessary vaccination of the crews were also performed.

(ii) *Public Health—European*.—The admission rate of European seamen to hospital for all causes calculated on arrival figure was 7·7 per mille. There was no death in the hospital. As in the previous year, many cases of beri-beri arrived in the port by sea from Burma seaports and some proved fatal.

(iii) *Public Health—Asiatic*.—Nineteen Asiatic seamen were admitted in the Chittagong General Hospital, 2 suffering each from malaria, measles, pneumonia, one each from diarrhoea, dysentery, influenza and smallpox and 9 from other causes. There were three deaths amongst them. There were no cases of accidental drowning amongst European or Asiatic seamen in the Port of Chittagong.

(iv) *Vaccination and anti-cholera inoculation*.—182 crews were vaccinated and 17 anti-cholera inoculations were performed.

(v) *Disinfection and fumigation*.—18 ships were partially disinfected and 5 fumigated in 1931.

(vi) No alien leper entered the country through the Port of Chittagong.

E.—Sanitary Works (Civil).

111. **Sanitary Works.**—It has already been dealt with in chapters VI and VII of this report.

F.—Public Health Board.

112. **Annual Report of the Sanitary Board, Bengal, 1931.**—The number of official and non-official members of the Board remained the same as in the previous year. The term of office of the non-official members appointed in 1930 having expired, they all were reappointed in August for a further term of one year.

Mr. C. W. Gurner, I.C.S., and Major-General W. V. Coppinger, I.M.S., were the President and Vice-President respectively throughout the year.

Dr. C. A. Bentley, C.I.E., was ex-officio Joint Secretary until 23rd February when he went on leave preparatory to retirement. Dr. R. B. Khambata acted for him during the remainder of the year. Mr. F. C. Griffin was ex-officio Joint Secretary throughout the year.

2. The Board held three meetings during the year, all in Calcutta.

3. The following schemes were approved by the Board:—

	Estimated cost.
	Rs.
(i) A sketch project for surface drainage of the Bhadrakali portion of Kotrung Municipality	13,110
(ii) The detailed project for improvement of Narayanganj (West Bank) water-supply	1,73,400
(iii) Darjeeling waterworks improvement—detailed scheme for lining the southern reservoir at Senchal, including arrangements for pumping from additional springs and laying of a new conduit line	1,84,000

The Board recommended to Government scheme (i) for administrative approval, and in the case of scheme (ii) the Board recommended that it should be finally sanctioned after verifying the legal possibility of changing the existing house connections in the municipality from the old to the new mains. The Board also supported the proposal of the municipal commissioners that in case delay is likely to occur in sanctioning the scheme in its entirety, they should be permitted to proceed at once with the construction of the most urgent portion of it estimated at Rs. 31,000, the entire cost being met out of the proposed municipal contribution towards the complete scheme.

Scheme (iii) was recommended for final sanction.

4. The Board considered inspection reports on the following waterworks made by the officers of the Public Health (Engineering) Department, and took such action as they thought necessary in each case:—

(i) Comilla waterworks—report by the Executive Engineer, Dacca Sanitary Works Division.

(ii) Khulna waterworks—report by the Executive Engineer, Central Division.

(iii) Nator waterworks—report by the Assistant Engineer (Mechanical) of Public Health Department, Bengal.

5. The Board considered a note on the discussion about resuscitation of Bengal rivers, held in the office of the Commissioner, Burdwan Division. They approved the action of the local anti-malaria associations in encouraging removal of obstructions on rivers, and were of opinion that such action should be pushed on with. They recommended to Government that action should be taken with regard to old rulings which made against resuscitation of rivers.

6. **Inspection reports of municipalities.**—They were circulated to the members of the Board and were discussed at their meetings.

7. **Water analysis reports.**—The Board examined the analysis reports on water supplies of the various towns in the province and took such action as was considered necessary.

R. B. KHAMBATA,

F. C. GRIFFIN,

Joint Secretaries.

C. W. GURNER,

President.

CALCUTTA,

The 3rd February 1932.

Chapter XIII.

GENERAL REMARKS.

113. **Personal proceedings.**—After admirable tenure of office for 15 years Dr. Bentley retired from the Directorship of Public Health on the 20th June 1931. I succeeded Dr. Bentley on his departure on leave on the 23rd February 1931 preparatory to retirement and I remained in charge for the rest of the year. Among the Assistant Directors of Public Health, Dr. Bramachari succeeded me as the Director of the Bengal Public Health Laboratory and Dr. A. C. Rai Chaudhuri officiated in the Presidency Circle up to the 29th July 1931. On Dr. Batra's return from a year's leave on the 30th July 1931, Dr. B. C. Mukharji was transferred to the Presidency Circle for the rest of the year. There was no other change in the superior personnel of the department. All of them contributed towards maintaining the efficient working of the department.

R. B. KHAMBATA,

Director of Public Health, Bengal.

CALCUTTA,

The 16th May 1933.

Part II

Nineteenth Annual Report of the Chief Engineer, Public Health Department, Bengal, 1931.

114. **Establishment.**—Mr. S. N. Ghose and Rai Saheb K. C. Banerjee, Executive Engineers, held charge of the Central and the Presidency Divisions, respectively, throughout the year.

Mr. W. J. Berry, Executive Engineer, Dacca Sanitary Works Division, went on eleven months' leave from March 3rd. Rai Saheb S. N. Roy, Assistant Engineer, acted in his place from that date till the end of the year.

Mr. B. N. Mazumdar, Executive Engineer, Western Division, was on leave from the 7th to the 25th April and 27th October to 7th November. No acting arrangements were made for these short periods, and the work of his division was carried on by myself.

The strength of the subordinate engineering establishment at the end of the year was as follows:—

	Permanent.	Temporary.	Total.
Assistant Engineers	4	2	6
Supervisors	1	7	8
Overseers .. ..	..	8	8
Sub-overseers .. ..	..	7	7

115. **Schemes prepared.**—The following projects were drawn up during the year:—

(a) *Sketch projects.*

	Estimated cost.
	Rs.
1. Baranagor Water-supply (revised)	4,35,800
2. Kamarhati Water-supply (revised)—Two alternative schemes were prepared—	
(i) Independent supply using a railway excavation in the municipal area as a storage and settling tank for river water	2,61,100
(ii) Supply from Calcutta Waterworks	2,06,900
3. Navadwip Water-supply (revised)	1,40,000
4. Kanchrapara Water-supply—The scheme is designed on the “decentralised storage” system—	
(i) With air lift and centrifugal pumping arrangement	1,34,200
(ii) With centrifugal pumps for both low and high lifts	1,34,200

				Estimated cost. Rs.
5.	Bogra Water-supply—The scheme was sent to the municipality, and was subsequently revised—			
	(i)	First scheme (complete)	.. ..	1,05,802
	(ii)	First scheme (initial)	.. ..	81,002
	(iii)	Revised scheme (complete)	.. ..	1,21,000
	(iv)	Revised scheme (initial)	.. ..	83,200
6.	Burdwan Water-supply Improvement—Schemes prepared in 1927 were redesigned and estimates revised at current prices of materials—			
	Scheme I (consisting of tube-wells, elevated reservoir, pumping plant, etc.)			1,10,000
	Scheme II (extension of distribution system only) ..			1,22,000
	Scheme I was again split up as follows in order that either portion might be executed independently if funds for the complete scheme were not available—			
	Scheme IA—All works included in scheme I excepting the elevated reservoir			50,000
	Scheme IB—The elevated reservoir with pipe connections			58,000
7.	Mymensingh Waterworks Improvement			97,300
8.	Jamalpur Water-supply			67,000
9.	Khulna Water-supply (second extension)			67,000
10.	Kurseong Water-supply extension			39,000
11.	Bankura Water-supply Improvement			97,300
12.	Naihati Sewerage (revised)—The scheme is divided into four sections, viz.—			
				Rs.
	(i)	Central section with main outfall works	2,22,300	
	(ii)	Northern section with auxiliary pumping station	70,000	
	(iii)	Southern section with ditto	59,800	
	(iv)	Surface drains	1,36,500	
				<hr/> 4,88,600
13.	Kamarhati Sewerage			2,50,000
14.	Taki Drainage (revised)			12,000
15.	Baidyabati Drainage—			
	(i)	Complete Drainage	1,03,500	
	(ii)	Drains and culverts along Grand Trunk Road only	7,900	
16.	Kishoreganj Surface Drainage			17,500

(b) Detailed projects.

	Estimated cost.
	Rs.
1. Rajshahi Water-supply—Two schemes were prepared—	
(i) With electric drive	3,14,265
(ii) With oil engine drive	3,27,565
2. Pabna Water-supply (revised) on decentralised storage system	2,22,200
3. Hooghly-Chinsura Waterworks Improvement—Partial scheme (renewal of machinery)	60,000
4. Serampore Water-supply—Repairs to the existing elevated reservoir	4,900

(c) Miscellaneous.

1. Improvement of Ryland Channel and Bager Khal ..	600
2. Raniganj Water-supply—	
(i) Addition of a smithy shop to the engine house ..	818
(ii) Ventilation pipe and arrangement for dredging silt from sump well	600
3. Tittaghur Sewerage Extension—	
(i) Gas collecting plant	850
(ii) Unfiltered water connection to dumping depots and public latrines	5,700
4. Midnapore Waterworks—	
(i) Sinking of a third supply-well, 25 feet internal diameter	21,000
(ii) Miscellaneous improvement works including erection of a chlorinating apparatus, oil tank and khalasis' quarters	15,350
5. Asansol Water-supply—A cook-room at the site of the elevated reservoir	520
6. Barisal Water-supply Improvement—Sub-soil drainage arrangement for repairing clear water reservoir and filters ..	1,200
7. Kurseong Water-supply Extension—Chlorinating apparatus ..	1,000
8. English Bazar Water-supply—Reinforced concrete cattle trough	300
9. Suri Water-supply—Extension of distribution system towards the old Police Lines	5,260
10. Bankura Water-supply—A new rising main	8,300
11. Rajbari Water-supply—Iron elimination plant	275

	Estimated cost. Rs.
12. Bhatpara Improvement scheme—Remaining works of the distribution system (revised)	21,300
13. Kustia Drainage—Drop-shutter culvert at the outfall works	2,700
14. Slaughter House in Serajganj Municipality	1,466
15. Pumping plant and pump-house for tube-well supply at Santal Mission Hospital at Sarenga	3,500
16. Gangasagar Mela Water-supply—1932	3,475
17. Faridpur Water-supply—Small additions and alterations of the staff quarters	339
18. Kalimpong Waterworks—	
(i) Maintenance of and repairs to Darjeeling Improvement Fund Water-supply for 1931-32	1,664
(ii) Extension of distribution mains in the development area	1,336
19. Kalimpong Hydro-Electric Supply—	
(i) Duplicating 5" diameter main from Thockchu to Rilli, 6" diameter from Sangser to Deola and from Deola to Bazar	98,900
(ii) 6" diameter duplicating main from Deola to B. P. tank, 2 numbers reservoirs with alterations to outlet for Mission Reservoir, etc.	30,300
20. Dacca Water-supply—	
(i) A 5" diameter tube-well including installation of motor and pump in Victoria Park	15,400
(ii) A 3" diameter tube-well including ditto	10,700
21. Rangamati Water-supply (revised for supply to bazar only)	20,300
22. Installation of a chlorinating plant for the water-supply at the Jalpaiguri Jail	420
23. Latrine and dumping depot at Ahsanullah School of Engineering at Dacca	1,500
24. Water-flush latrines for the <i>hajjat</i> attached to the Magistrate's Court, Dacca	1,576
25. Dum-Dum Drainage Improvement	6,250

The scheme for the improvement of sanitation of the Dacca Central Jail was revised and also a catchpit was designed to catch the waste rice and other solids which choke up the main gulley pit in the adjoining street.

116. **Schemes examined.**—The following schemes prepared by the Municipal Engineer, Darjeeling, for improvement of the Darjeeling water-supply were examined:—

Rs.

(a) (i) Laying out a new conduit and installation of pumping plant, ferro-concrete tank, chowkidars' quarters, etc.	50,000
(ii) Lining the southern reservoir at Senchal ..	1,34,000
(iii) Extension of supply to Ghoom and Bhanjang—	
Scheme I	21,500
Scheme II	43,500

(b) The total value of schemes prepared was as follows:—

Rs.

(1) Sketch projects	31,82,304
(2) Detailed projects	9,28,930
(3) Miscellaneous	1,99,826
Total ..	43,11,060

The total value of schemes examined was Rs. 2,49,000.

117. **Works executed under the supervision of the department.**—

(i) *Dacca Waterworks Improvement III* (Rs. 4,80,000).—The second suction well was completed and is ready for use as soon as the repairs to the reservoir are executed by the municipal authority. A number of new standposts were fixed and taken into use. Owing to shortage of funds the remaining standposts could not be fixed.

(i) (a) Repairs to another section of the filtered water suction pipe at the Dacca Waterworks were carried out by the department, the cost being met by the municipal authority.

(ii) *North Chandpur Water-supply scheme* (Rs. 1,53,000).—Operations on the construction of the jetty, storage and coagulating tanks, pumping station building (comprising engine-house, filter-house, clear water reservoir, office, store-room and workshop) and the laying of the distribution mains and suction pipes for which contracts were let in December 1930 were carried on during the year, and the major portion of the works completed.

Erection of machinery and filters was taken in hand towards the close of the year and it is expected that the works will be put into operation in April 1932.

(iii) *Narayanganj (East Bank) Water-supply scheme.*—Work on the construction of the main building, comprising the engine-house, office, store-room, workshop and clear water reservoir was in progress during the year, and had advanced sufficiently by the end of the year for erection of machinery to commence in January 1932.

The suction pipe from tube-well No. 1 was connected to the pump well. The coagulating tank and elevated reservoir for zone No. 1 were completed. The laying of the pumping and the distribution mains

for the various zones was practically completed. Owing to delays in the acquisition of land the construction of two of the zone reservoirs has had to be held in abeyance.

With the exception of these reservoirs, it is anticipated that the remainder of the works will be put into operation by April 1932.

(iv) *Dacca Main Drainage Extension Scheme*.—A number of gulley pits were constructed and additional ventilating shafts erected.

Two hand dumping depots were constructed and put into operation in Urdoo Road.

(v) *Improvement of the drainage at Tangail Sub-jail*.—A portion of this work was completed but the remainder had to be held in abeyance owing to a boundary dispute with the municipal authority which resulted in funds lapsing.

(vi) *Mitford Hospital, Dacca*.—A sewer connection between the surface drains around the infectious diseases wards and the municipal sewer system was constructed and put into use.

(vii) *Bhatpara Improvement scheme—Sewerage (Building and General)*.—The staff quarters, the pumping station and receiving well were completed at the beginning of the year. All the machinery for the pumping station was delivered and erected complete. Laying of the rising main and the excavation of the storage and storm-water tanks were also completed.

The construction of the masonry tanks for the simplex plant was commenced towards the end of the year and fair progress was made.

Sewerage system.—Altogether 17,967 feet of sewers were laid during the year, of which 8,264 feet were Hume pipes and 9,703 feet stoneware pipes.

Water-supply.—Laying of the distribution system was completed with the exception of the portion along the new roads, and connections were made for supply from the mills. Works to the value of Rs. 4,71,330 were paid for during the year.

(viii) *Tittaghur Sewerage Extension*.—The third unit of the simplex activated sludge plant was completed and brought into operation early in the year. The sewers and the surface drains were also completed. Works to the extent of Rs. 57,900 were completed during the year.

(ix) *Bansberia Water-supply*.—The laying of the distribution system was practically completed and supply commenced about the middle of the year. Works worth about Rs. 28,800 were completed during the year.

(x) *Asansol Water-supply*.—Practically the whole scheme was completed, one zone centre chamber and some minor works remaining to be done.

(xi) *Midnapore Water-supply*.—The remaining portion of the distribution system was completed, also the chlorinating chamber and oil reservoir. Tenders were obtained for the construction of the staff quarters.

(xii) *English Bazar Water-supply*.—Contracts were let out and good all round progress was made. The engine-house and drivers' quarters were constructed and the machinery erected. A good many lengths of both trunk mains and zone mains were laid.

(xiii) *Barisal Waterworks*.—The contracts for the elevated reservoir and the repairs to the settling tank and filters were let out. The work for the elevated reservoir was started in December and preparations for starting the other works were in progress.

(xiv) *Faridpur Waterworks*.—Some additions and alterations to the settling tank and the lime mixing plant were done. Also some changes were made in the Superintendent's quarters.

(xv) *Kurseong Water-supply*.—Arrangements for gauging the flow at the source of the Pagla Jhora were made and readings taken.

118. **Expenditure on new works**.—The total capital expenditure on waterworks and sewerage works during the year was Rs. 6,43,402 and Rs. 6,15,483, respectively, *vide* Appendices I and II, as against Rs. 5,77,537 and Rs. 3,19,005, respectively, in the previous year.

119. **Maintenance of sewerage works and waterworks**.—(i) *Dacca University Sewerage system*.—The system was put into operation in July and the running of the automatic electric pumping plant was supervised by the department, the working expenses being provided by the municipal authority.

The operation of the pumps for providing flushing water in the various University buildings was also supervised by the department at the expense of the University.

The sanitary installation in the new hostel for the Ahsanullah School of Engineering was put into operation during the year.

(ii) *Government Buildings Sanitation scheme*.—The sanitary installations at the following schools were inspected and maintained in working order, viz.—

(i) Dacca Collegiate School.

(ii) Islamic Intermediate College, Dacca.

(iii) Dacca Muslim High School.

(iv) Normal School, Dacca.

(iii) *Kalimpong Waterworks*.—The works were maintained by this department as in previous years.

(1) The monthly returns of the various sewerage and waterworks were regularly checked and necessary action taken on cases of irregularities.

In accordance with the rules for the management of waterworks, the budget estimates of municipal waterworks were scrutinised and cases of omissions or irregularities were duly brought to the notice of the local bodies concerned, with necessary instructions. With the increase in the number of municipal waterworks, this work has occupied an increasing and appreciable amount of time of the department year by year.

(2) The reports of Messrs. Worthington Simpson, Ltd., on their periodical inspections on the various waterworks machinery and filters were scrutinised and forwarded to the local bodies concerned with necessary remarks.

(3) The reports on analyses of water issued by the Director of Bengal, Public Health Laboratory, and the Medical Officer, Darjeeling,

were regularly dealt with and necessary action taken to improve the quality of water in the cases of unsatisfactory results.

(4) The Mechanical Assistant Engineer and the Mechanical Overseer of the department carried out inspections of several waterworks.

(5) It was decided by Government that the waterworks plant at the Midnapore Jail should be periodically inspected by the Assistant Engineer (Mechanical) of this department. The first inspection was carried out by the Assistant Engineer and his report was sent to the Inspector-General of Prisons.

(6) At the request of the Deputy Inspector-General of Police, Burdwan Range, a special inspection of the waterworks plant at the Burdwan Police Lines was made by the Assistant Engineer (Mechanical) and his report sent to the Deputy Inspector-General of Police, Burdwan Range.

(7) The total number of municipal waterworks in operation in the province during the year was 45. The total number of persons served was 1,126,099 and the total quantity of filtered water supplied was 15,092,459 gallons per day on an average.

(8) The diagram in Appendix III shows the comparative figures for consumption of coal and fuel oil during the year at the various waterworks and sewage pumping stations in the Presidency.

(9) At the request of the District Board, 24-Parganas, arrangements were made for supply of sterilised water to the pilgrims at Saugor Island on the occasion of the annual *mela*. The effect of the measure was satisfactory. There was no outbreak of cholera or any other water-borne diseases in an epidemic form amongst the pilgrims.

(10) The three student-engineers of the Bengal Engineering College, who were taken for practical training in the department in the previous year, duly completed their training and a fresh batch of four students were admitted during the year under review.

(11) The five student-overseers (3 scholars and 2 non-scholars) of the Ahsanullah School of Engineering, Dacca, who were taken in the previous year for practical training, duly completed their respective courses of 17 and 12 months. A new batch of four student-overseers (including three scholars) from the school were admitted for training.

(12) Training in Elementary Sanitary Engineering was given to the students of the Sanitary Inspectors' Training Class of the 28th and 29th sessions and the examinations held. The training given to the students of the latter session was for a very short period, being covered by a series of 30 lectures delivered in about 1½ months' time. The syllabus had therefore to be cut down.

(13) I was appointed a member of the committee which was constituted by Government to examine the proposals of the Calcutta Corporation for the construction of a new outfall to the Kultu river. I inspected several places in company with the other members of the committee and investigated the matter.

(14) The possibility of eliminating iron from tube-well water by means of an upward flow gravel filter was investigated, and sanction of Government for carrying out an experiment was obtained. Necessary

arrangements were made but the work could not be started until the following year.

(15) At the request of the Surgeon-General the plan of the proposed septic tank latrine at the Hat Baligaon Charitable Dispensary was examined and an opinion given.

(16) Under orders of Government a survey of the existing sources of pollution of the portion of the Hooghly river between the Tittaghur Khal and the Ichapur Khal was made and a report submitted to Government.

(17) The total value of the schemes carried out by this department was Rs. 9,18,500. This is much less than what should have been spent in a province of the size of Bengal. Since I took over charge of the department 5 years ago a large number of schemes have been prepared, but the local bodies have been able to proceed with only a few of them.

The Bengal municipalities are notorious for bad sanitation. To illustrate how urgent the need of water-supply and drainage schemes is in some of them I quote a few of the remarks of the Assistant Directors of Public Health from their inspection notes:—

Natore.—“The Municipality appears to be badly drained. Stagnant pools, filthy dobas, weedy and jungly kutchas, drains and water-steeped rice fields are to be seen everywhere. * * * * It is difficult to suggest any improvement short of a well-planned drainage scheme.”

Krishnagar.—“Drainage.—This is the crying need of the town, especially in ward I. The sullage water and a part of the sewage collected in cesspits by the sides of roads and lanes, forming an undesirable nuisance and breeding places of mosquitoes.”

Taki.—“The incidence of malaria is going up. The engineering branch of the Public Health Department has recently drawn up a scheme of drainage for the municipality. The adoption of the scheme is recommended.”

Navadwip.—“Cholera.—The death rates * * are high * * * I found liquid sewage from cess pools connected with the privies of several lodging houses overflowing roads and lanes which have no side drains and causing great nuisance. * * *. The municipality should have proper drains * * *.”

Vishnupur.—“The high incidence of water-borne diseases in the town is a strong argument in favour of the introduction of filtered water system in the municipality.”

It is hoped that when the present financial stringency is over, local bodies will take an early opportunity of making a start with the schemes which have been prepared for them by this department.

(18) The chief event of the year was the opening of the Asansol waterworks. This is the first waterworks in which water is supplied under a new system—the decentralised storage system—which has been newly designed by me. This scheme differs from the old waterworks in that the supply, instead of being given direct to taps, is made to flow into small storage tanks placed on the roofs of houses or at the roadside. From the storage tanks pipes lead to as many taps as a householder likes to instal. The flow into the storage tanks is regulated

so that the householder receives the daily quantity of water to which he is entitled according to the water rate he pays.

The new system has the unique advantage of preventing waste of filtered water without the assistance of meters. The problem of fixing meters to house-connections and maintaining them properly has become very difficult. It has been a subject of controversy between rate-payers and lawyers for many years and it has become practically impossible to prevent waste of water by merely fixing meters. The new system has removed this long-standing difficulty. A new era has thus dawned on the history of water-supply in Bengal, and when other schemes, which have been prepared in accordance with the new design, are constructed, people will begin to learn how to use filtered water economically. The enormous quantity of filtered water which is daily seen passing through the drains of many towns owing to the taps being left continually open will be available for use by other people. The machinery will not be over-taxed and its life will be prolonged.

(19) The total amount of receipts was Rs. 80,811 as detailed below :—

	Rs.
(1) Fees for preparation of schemes	17,643
(2) Fees for supervision of construction of schemes ..	58,831
(3) Miscellaneous	4,337
Total ..	<u>80,811</u>

Fees amounting to Rs. 9,926 were outstanding; so the total earning of the department was Rs. 90,737.

With regard to (1) it should be remembered that the amount represents fees levied on detailed schemes only, as under the existing rules no fees can be levied on sketch projects. Considerable time is spent in the preparation of sketch projects. Also special requests are received from local bodies for inspection of the sewerage or waterworks when anything goes wrong with them. In advising the local bodies it is often necessary to prepare estimates for new works. All these take up considerable time of the department but no fees are levied.

The amount of fees realised should not therefore be the criterion of the work done by the department.

(20) The serious deficit in the provincial finances has necessitated reduction of establishment of this department. Still, with the reduced staff several important schemes were prepared, and whatever assistance asked for by the local bodies and other departments of Government was duly rendered. As regards the works which were under construction, there was the usual difficulty of delay and shortage of funds. Nevertheless, the year may be looked back upon with a degree of satisfaction as one in which a large amount of useful work was done by the department.

F. C. GRIFFIN, M.INST.C.E., M.I.E. (IND.),

*Chief Engineer,
Public Health Department, Bengal.*

CALCUTTA;
The 29th March 1932.

Appendices

APPENDIX

Statistics with regard to Municipal

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. mile.				Rs.	Rs.
1	Burdwan ..	1884	3·30	39,201	447,419	12·78	5,75,986	1,491
2	Mymensingh ..	1893	2·50	30,500	326,578	10·70	4,63,507	1,376
3	Howrah ..	1896	10·10	195,300	3,863,665	19·78	40,93,314	1,40,937

I.

waterworks in Bengal 1931.

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and repayment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
23,773	2·32	..	River Banka	Five slow sand filter beds.	Two Tangye's horizontal crude oil cold starting type engines, rated 77 B. H. P. ; 28" single stage low lift type Tangye's centrifugal pumps direct belt driven, capacity of each 52,000 gallons per hour, average total lift 39'. Two Tangye's Triplex single acting horizontal plunger pumps. The shaft is coupled direct with the engine by a friction clutch and the pumps are driven through a single reduction, helical gearing. Capacity of each pump 47,000 gallons per hour. Average total lift 96·34'. One Tangye's "AA" type oil engine 24" B. H. P. single cylinder for workshops. One Lancashire boiler and one horizontal compound Worthington condensing pumping engine.
40,697	5·46	5,441	River Brahmaputra.	Ditto ..	Three condensing compound Worthington Duplex pumping engines and one triple expansion horizontal Worthington Duplex high and low lift combined pumping steam engine; total lift 72'. One loco type boiler and one Babcock and Wilcox water type boiler.
1,79,510	2·03	..	River Hooghly	Ten slow sand filter beds.	For <i>unfiltered water</i> —Two vertical high speed uniflow engines direct coupled with two 20" Worthington low lift centrifugal pumps. Average total head—34 feet. For <i>filtered water</i> —One Worthington vertical triple expansion flywheel triplex pumping engine. One Worthington horizontal triple expansion Duplex pumping engine. Two horizontal compound condensing Duplex pumping engines by Evans and Dean. Average total head 92'. Five Lancashire boilers.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. miles.				Rs.	Rs.
4	Berhampore ..	1899	6.00	26,670	313,428	11.75	3,79,971	2,827
5	South Suburban ..	1904	3.00	17,100	33,260	1.88	66,728	170
6	Garulia ..	1904	1.25	14,022	223,370	15.92	9,705	154
7	Tittaghur ..	1905	1.50	49,610	1,764,600	35.50	17,929	..
8	Bhatpara ..	1906	5.00	80,000	1,000,000	12.50	2,35,643	7,003
9	Naraingunge (west bank of the river)	1908	3.00	30,600	326,152	10.65	2,53,312	..
10	Tollygunge ..	1909	5.75	22,000	71,540	3.25	69,023	2,671
11	Champdany ..	1909	1.50	20,000	407,000	20.35	..	..
12	Daeaa ..	1910	7.00	137,000	2,132,409	15.56	16,79,456	45,602
13	Munshigunge ..	1911	1.00	4,000	13,000	3.25	41,917	..
14	Barisal ..	1912	3.52	35,391	116,291	3.28	2,16,599	2,078

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and repayment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
30,337	4·24	936	River Bhagira-thi.	Two slow sand filter beds.	<i>Filtered water pumping station</i> —Two compound horizontal condensing Duplex Worthington pumping engines. Average total lift 90·3'. Two loco type boilers. <i>Unfiltered water pumping station</i> —One Sisson high speed tandem compound, non-condensing engine, direct coupled to one 8" Worthington slow speed low lift centrifugal pump. One vertical Cochran boiler of the multitubular type on a barge. One Tangye's semi-diesel crude oil engine, 24 B. H. P. One Tangye's centrifugal pump direct belt driven on a barge—Average total lift 55'.
1,792	2·36	..	Supplied from Calcutta waterworks.	....	....
..	} Supplied from local mills.				
..				
..					
27,257	3·66	6,359	River Sitala-khya.	One Jewell gravity filter.	Two loco type boilers N. H. P. 12. Duplicate sets of Worthington horizontal triple expansion, surface condensing combined high and low lift pumping engines, average total lift 140'.
21,960	13·45	..	Supplied from Calcutta waterworks.	....	....
Supplied from local mills.					
42,687	0·86	..	River Buriganga	Six Jewell gravity filters and two Patterson gravity filters.	Two sets of horizontal Worthington triple expansion, combined high and low lift pumping engines. Average total lift 74·5'. Two Babcock and Wilcox water tube boilers, N. P. H. 76, fitted with superheaters—Green's economiser. Working pressure 160 lbs. sq.
3,145	10·59	..	River Dhales-wari.	Two Jewell pressure filters.	Two horizontal Worthington Duplex piston pattern non-condensing pumping engines. Two vertical cross tube boilers, N. P. H. 5, average total lift 74'.
19,338	7·28	2,230	River Barisal	Three slow sand filters.	Two Worthington tandem compound, surface condensing, horizontal double acting, combined high and low lift pumping engines. Average total lift 86·7'. Two loco type boilers.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. miles.				Rs.	Rs.
15	Chandpur (Southern Section).	1912	0.09	6,000	15,313	2.55	1,29,894	69,777
16	Darjeeling ..	1912	4.85	19,834	602,739	30.38	6,66,750	32,296
17	Perojpur ..	1913	0.50	2,300	3,200	1.39	21,949	..
18	Kurseong ..	1913	2.00	6,000	150,000	25.00	1,10,241	..
19	Hooghly-Chinsurah	1914	5.00	29,940	461,271	15.40	6,22,095	1,636
								..
20	Jessore ..	1914	4.00	8,000	36,767	4.59	1,96,874	..
21	Khulna ..	1914	2.00	10,000	80,792	8.08	1,21,093	1,550
22	Serampore ..	1914	1.62	33,200	284,833	8.57	3,19,453	2,335

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and repayment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
4,353	12·46	1,104	River Meghna	Two Jewell pressure filters.	Two horizontal Worthington Duplex piston pattern non-condensing pumping engines. Two vertical cross tube boilers. N. H. P. 5, average total lift 74'.
8,499	0·60	..	30 springs on Senchal spur.	Nil ..	For subsidiary service to St. Paul's School and three adjacent properties, two 10 H. P. motors, one Rees Roturbo pump and one Hayward Taylor duplicate plunger pump.
495	..	..	Reserved tank	Two slow sand filters.	Two kite motion hand pumps.
7,274	2·12	993	Spring in the forest of Sepoydhura.	Two Jewell pressure filters.	Gravity supply.
27,435	2·60	15,609	River Hooghly	Three slow sand filter beds.	Two Worthington horizontal triple expansion surface condensing pumping engines. Average total lift 116·7'. Two vertical high speed compound Sisson engines direct coupled with two 10" medium lift centrifugal pumps. Three Babcock and Wilcox boilers, 343 sq. ft. heating surface each. 150 lbs. working pressure.
6,979	8·32	4,417	Reserved tank and tube-well.	Three Paterson's gravity filters.	Two Tangye's kerosine oil engines of 12 B. H. P. each. Four 4" centrifugal pumps (Tangye). One Broom and Ward's air compressor. All countershaft belt driven. Average total lift 47·5'.
10,954	..	816	Reserved tank and river.	One Paterson's gravity filter.	<i>Low lift from river to reserved tank.</i> —One Worthington Duplex horizontal piston pattern pumping engine. One vertical boiler, N. H. P. 8, medium lift. <i>Unfiltered water from reserved tank to the settling tanks.</i> —Two Gwyne's centrifugal pumps, each having a capacity of 7,500 gallons per hour. <i>High lift.</i> Two Gwyne's centrifugal pumps for filter water, each having a capacity of 7,500 gallons per hour. All these centrifugal pumps are driven by two Blackstone spring injection type cold starting crude oil engines of 9 B. H. P. each, direct belt driven. Average total lift 75·8'.
45,220	6·95	..	River Hooghly	Filtered water is taken from Howrah water-works.	Two horizontal double-acting condensing Duplex pumping engines. Average total lift 110'. Two Cornish boilers.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. mile.				Rs.	Rs.
23	Bankura ..	1916	2.50	22,273	128,257	5.76	1,18,229	888
24	Chittagong ..	1916	4.25	40,000	461,583	11.53	3,96,587	7,748
25	Baranagore ..	1918	0.82	8,000	32,446	4.05	15,173	..
26	Uttarpara ..	1918	0.75	9,394	106,640	11.35	1,93,618	..
27	Nator ..	1919	1.60	7,000	18,914	2.35	1,04,492	..
28	Rajbari ..	1919	0.76	3,250	16,000	4.92	63,908	..
29	Satkhira ..	1919	3.00	7,500	14,158	1.88	89,251	8,712
30	Noakhali ..	1920	..	2,500	4,463	1.12	37,172	..
31	Kalimpong ..	1922	1.50	8,792	132,000	15.01	7,98,232	3,719

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and re-payment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
9,932	3·39	1,645	River Gandheswari.	Two infiltration galleries in bed of river Gandheswari.	Two semi-diesel crude oil engines, one Petter's vertical two-cycle and one Campbell horizontal four cycle direct belt driven. Two horizontal Worthington Duplex pumps. Total average lift 150'.
53,156	20·58	..	Three bore holes	Paterson's iron eliminating plant and two low gravity type filters.	Two horizontal triple expansion surface condensing flywheel steam engines driving direct two double-acting plunger pumps for high lift and air compressure for low lift. Two Lancashire boilers. Average total lift 104'.
5,935	8·85	..	Supplied from local mills.	....	....
12,973	5·33	3,718	River Hooghly	One Paterson's low gravity type filter.	Two sets of Tangye's centrifugal pumps, consisting of three in each set, driven by two Tangye's patent semi-diesel crude oil engines. Countershaft belt driven. Average total lift 63·7'.
3,961	9·17	..	Reserved tank and tube-well.	One Jewell pressure filter.	Two Worthington Ingico oil engine of 4 B. H. P. Two Worthington "A" type horizontal double acting power pumps, capacity of each pump per hour 3,000 gallons. Direct belt driven. Average total lift 65'.
3,855	10·55	..	Ditto ..	Ditto ..	Two 3 B. H. P. Petter's two-cycle vertical kerosine oil engines. Two "A" type double acting horizontal Worthington single power pumps, capacity 1,500 gallons per hour. Direct belt driven. Average total lift 55'.
4,118	12·75	..	Reserved tank	One Mather and Platt's mechanical pressure filter.	Mather and Platt's turbine centrifugal pump of 4,000 gallons per hour capacity, average total lift 70·7', countershaft belt driven by two Campbell's crude oil engines of 9 B. H. P. each; one chemical pump, plunger type, for pumping coagulant.
2,243	27·54	566	Ditto ..	No filter, chlorinating apparatus only.	One vertical boiler and one Worthington Duplex non-condensing pumping engine.
10,122	3·37	..	Springs of the river Rilli.	Nil ..	Gravity supply.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. miles.				Rs.	Rs.
32	Krishnagar ..	1922	7.00	22,300	169,457	7.59	4,12,595	897
33	Comilla ..	1925	2.58	25,914	116,663	4.50	4,56,833	3,835
34	Bhadreswar ..	1926	1.77	20,000	218,082	10.90	..	..
35	Midnapore ..	1926	3.50	30,000	372,229	11.74	5,64,903	25,235
36	Raniganj ..	1927	1.85	16,349	128,318	7.84	3,28,226	2,520
37	Suri ..	1927	3.00	10,915	50,741	4.64	2,35,119	3,203
38	Naihati ..	1928	1.68	30,942	218,698	7.06	1,95,296	..
39	Faridpur ..	1929	5.0	14,000	56,834	4.07	1,58,421	2,602
40	Patuakhali ..	1929	2.00	5,000	12,382	2.57	1,26,930	3,613

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and repayment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
15,492	4.00	14,571	River Jalangi	One Jewell mechanical gravity filter.	Two Ransomes, Sims and Jefferies semi-diesel engines, 15 B. H. P. each. Two Ransomes, Sims and Jefferies semi-diesel engines, 10 B. H. P. each. Two Worthington 2½" high lift centrifugal pumps. Two Worthington 3" medium lift pumps and one 6" Worthington low lift centrifugal pump. All direct belt driven. Total average lift 43.9'.
12,732	6.78	3,608	Tube-wells ..	One Paterson pressure filter.	Two 9½ B. H. P. high compression type crude oil engines, one 10 B. H. P. high compression cold starting crude oil engines—of Campbell Gas Engine Co. Three Worthington triplex ram pumps, direct belt driven. Average total lift 93.4'.
..	..	..	Supplied from local mills.	....	....
20,350	2.39	7,227	Two wells in the bed of river Cossye with auxiliary tube-wells.	Nil ..	Two 42 B. H. P. Campbell horizontal crude oil engines driving two vertical treble ram pumps. Direct belt driven. Average total lift 135'.
12,542	4.28	5,970	Well in bed of river Damodar with auxiliary tube-wells.	Nil ..	Two Campbell high compression crude oil engines of the horizontal single cylinder ordinary cold starting type 23—26 B. H. P. each. Two Campbell vertical treble ram water pumps, capacity 12,500 gallons per hour each. Direct belt driven. Average total lift 174.5'.
5,728	4.94	7,390	Infiltration gallery in bed of river Mourakhi.	Nil ..	Two three-throw ram pumps of 7,500 gallons capacity each, direct belt driven by two 15 B. H. P. Campbell high compression horizontal heavy oil engines. Average total lift 135.7'.
2,272	0.45	14,309	Supplied from local mills.	....	....
9,916	7.64	2,829	Tube-well ..	Iron elimination plant and Jewell gravity filter.	Two Crossley's vertical two cycle crude oil engines. 10 B. H. P. each, driving two Worthington low lift centrifugal pumps and two Worthington high lift centrifugal pumps and lime apparatus. Countershaft belt driven.
2,819	9.11	887	Reserved tank	One Kennicott pressure filter.	Two Evans' power pumps. Two 3 B. H. P. Petter's vertical kerosine oil engines. Direct belt driven. Pumping capacity of the pump is 300 gallons per hour. Average total lift 46'.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1931.	Total capital expenditure during 1931.
1	2	3	4	5	6	7	8	9
			Sq. miles.				Rs.	Rs.
41	Asansol ..	1930	4.04	25,302	160,977	6.36	3,96,424	62,506
42	Bansbaria ..	1931	..	..	..	..	76,807	25,925
43	English Bazar ..	In progress.	..	..	..	..	52,075	45,523
44	Narainganj (East Bank).	Do.	..	..	..	..	1,38,076	64,886
45	Chandpur (Northern section).	Do.	..	..	..	..	97,437	69,777
	Total ..	..	..	1,126,099	15,092,459	..	1,53,47,273	6,43,402

Annual cost of maintenance (exclusive of loan charges).	Cost of delivery of 1,000 gallons (exclusive of loan charges).	Interest and re-payment of loan charges.	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14	15
Rs.	Annas.	Rs.			
6,691	1 82	9,838	Infiltration gallery in bed of river Damodar.	Nil ..	Two General Electric "Witton frame" enclosed ventilated type slip ring induction electric motors of 49 B. H. P. each, 400 volts A. C., direct coupled with two Sulzer high lift centrifugal pumps. Capacity 22,000 gallons per hour each. Average total lift 270'.
..	Supplied from local mills.	....	....
..	Two tube-wells	....	....
..	Ditto ..	Iron elimination plant with Paterson's filter.	....
..	River Dakatia	Two Jewell gravity filters.	....
..			

APPENDIX II.

**Total expenditure on Drainage and Sewerage Works in the municipalities in
Bengal up to 31st December 1931.**

No.	Name of municipality.	Area served.	Approximate population served.	Total capital cost up to 31st December 1931.	Total capital expenditure during the year 1931.	Annual cost of maintenance.
1	2	3	4	5	6	7
		Sq. miles.		Rs.	Rs.	Rs.
1	Bankura	0·04	5,000	10,002	..	..
2	Baranagore	0·82	17,750	70,561	1,594	3,260
3	Barasat	3·50	5,500	24,809	..	281
4	Barnipur	1·20	5,114	17,209	..	592
5	Basirhat	8·50	21,282	19,851	531	..
6	Berhampore	6·00	26,670	54,095	414	3,154
7	Bhadreswar	0·30	10,500	28,943	..	750
8	Bhatpara	5·00	80,000	8,48,875	4,74,950	11,962
9	Budge Budge	2·00	5,612	81,218	..	3,976
10	Burdwan	4·00	28,000	1,82,612	738	981
11	Champdany	2·00	20,000	1,53,988	4,898	1,396
12	Chandpur	0·05	2,450	1,723	..	1,062
13	Dacca	4·00	100,000	24,88,168	29,158	11,864
14	Darjeeling	4·85	19,834	1,70,134	5,504	2,399
15	English Bazar	2·00	11,000	31,017	200	336
16	Garulia	1·13	13,022	52,566	..	..
17	Howrah	3·09	102,390	13,82,829	27,367	48,040
18	Jangipur	3·00	12,000	47,254	..	27
19	Kalimpong and Bazar .. ..	..	..	64,013	297	..
20	Katwa	1·00	8,000	55,909	200	998
21	Khulna	1·75	8,000	14,572	223	1,526
22	Krishnagar .. ..	..	16,000	28,000	..	..
23	Kurseong	2·00	4,000	2,55,736	912	1,520
24	Kushtia	0·55	5,000	35,889	..	1,222
25	Naraingunge	0·06	2,500	7,053	2,597	1,117
26	Patuakhali	2·00	5,000	..	..	613
27	Ranaghat	1·50	8,000	44,547	566	121
28	Rangpur .. ..	..	..	91,591*	..	..
29	Serampore	0·005	1,800	22,890	689	121
30	Suri (in progress) .. ..	..	..	38,546	2,225	1,052
31	Tangail	2·19	3,000	23,604	1,552	564
32	Tittaghur	1·50	49,610	12,77,157	57,928	12,277
33	Uttarpara	0·60	5,000	31,157	2,940	1,092
	Total .. ..	..	602,034	76,56,518	6,15,483	..

* Reconstruction of the Goghat Bridge.

APPENDIX III

WATER WORKS AND SEWAGE PUMPING STATIONS IN BENGAL. 1931.

DIAGRAM SHOWING CONSUMPTION OF COAL PER PUMP HORSE POWER HOUR

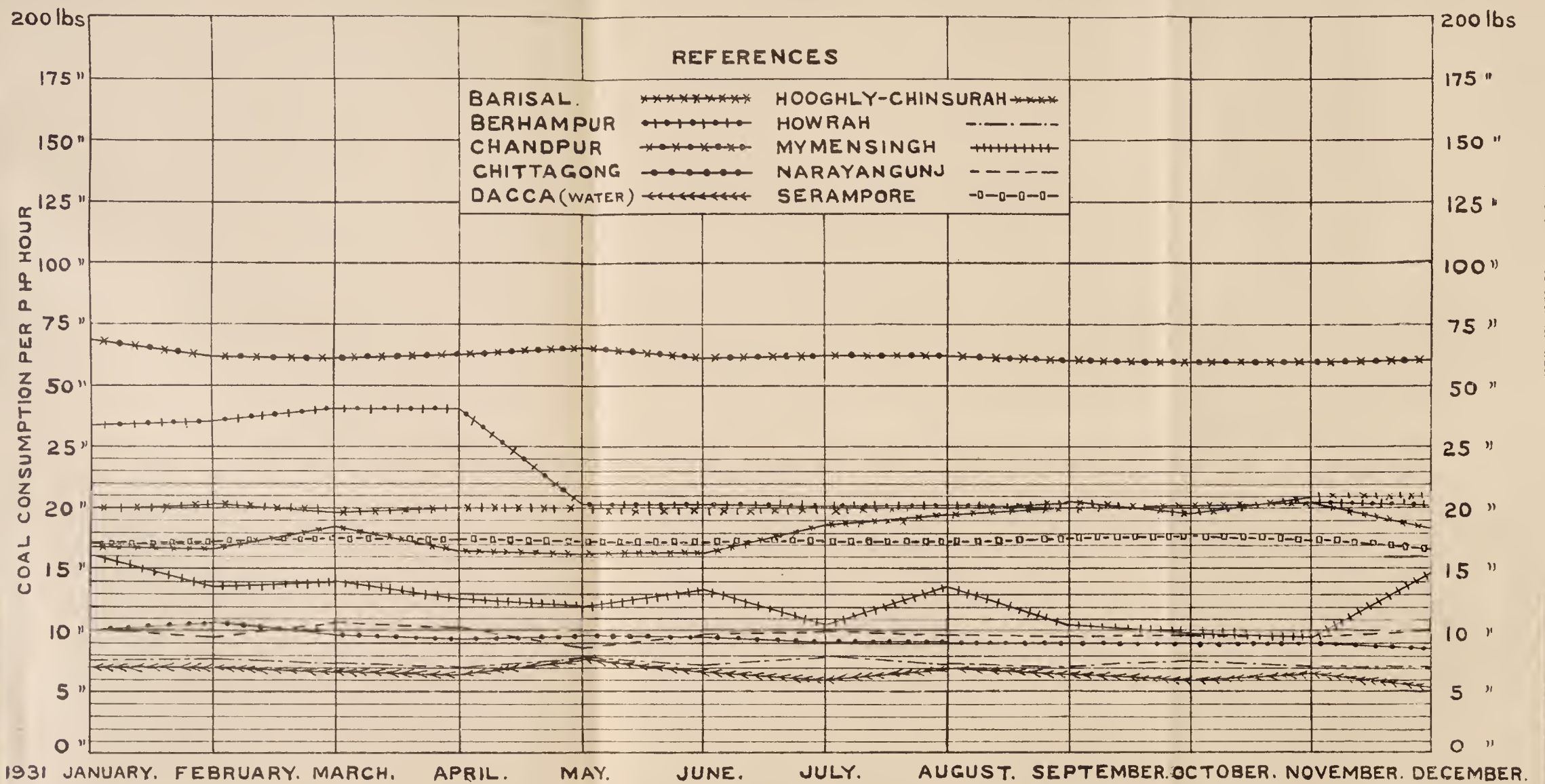
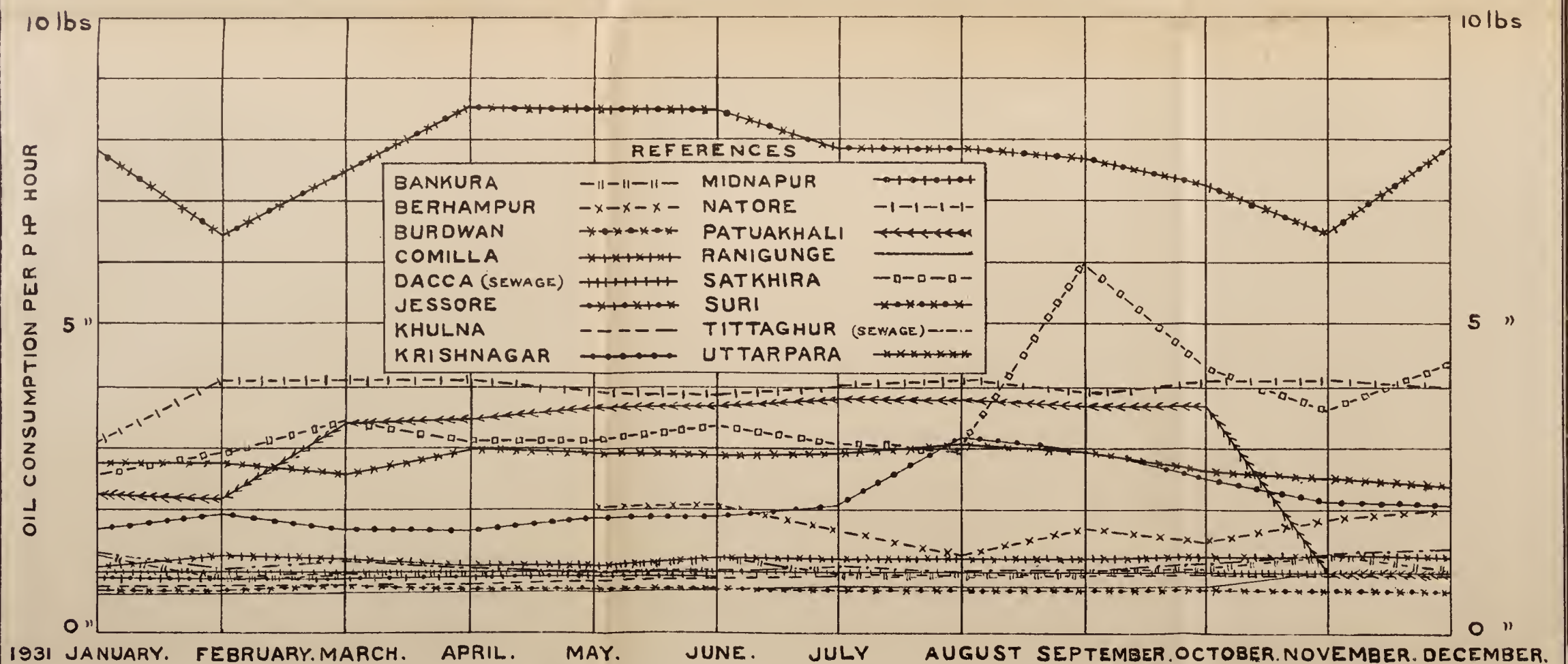


DIAGRAM SHOWING CONSUMPTION OF OIL PER PUMP HORSE POWER HOUR



Part III
Appendices

Appendix I

Vital Statistics of the Districts of Bengal for the year 1931

Annual Form No. I.—BIRTHS registered in the districts of the Bengal Presidency during the year 1931.

1	2	3 Population according to Census of 1931.			4 Number of births registered (exclusive of still-births).			5 Ratio of births per 1,000 of population.			6 Number of males born to every 100 females born.	7 Excess of births over population.	8 Excess of deaths over population.	9 Mean ratio of births per 1,000 during previous five years.		
No.	Districts.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			Male.	Female.	Total.	
	Burdwan Division.															
1	Burdwan	814,891	760,808	1,575,699	22,192	20,407	42,599	14.1	12.9	27.0	108	4.6	13.9	13.0	26.8	
2	Birbhum	472,687	474,867	947,554	18,305	17,394	35,699	19.3	18.3	37.7	105	8.3	18.2	17.4	35.6	
3	Bankura	557,074	554,647	1,111,721	16,008	15,460	31,468	14.4	13.9	28.3	103	5.4	16.3	15.5	31.8	
4	Midnapur	1,417,025	1,382,068	2,799,093	40,120	37,896	78,016	14.3	13.5	27.9	105	5.4	14.4	13.7	28.1	
5	Hooghly	592,130	522,125	1,114,255	14,325	13,510	27,835	12.9	12.1	25.0	106	4.5	12.4	11.3	23.7	
6	Howrah	599,075	499,792	1,098,867	14,717	13,491	28,208	13.4	12.3	25.7	109	7.2	12.6	11.4	24.0	
	Presidency Division.															
7	24-Parganas	1,464,953	1,248,921	2,713,874	36,943	33,566	70,509	13.6	12.4	26.0	110	9.5	12.1	11.0	23.1	
8	Calcutta	814,948	381,786	1,196,734	13,794	12,683	26,477	11.5	10.6	22.1	108	..	9.1	8.0	17.2	
9	Nadia	788,885	740,747	1,529,632	26,521	24,684	51,205	17.3	16.1	33.5	107	2.2	15.2	14.2	29.4	
10	Murshidabad	683,483	687,194	1,370,677	26,405	25,158	51,563	19.3	18.3	37.6	104	9.7	19.2	18.2	37.4	
11	Jessore	871,446	799,718	1,671,164	20,987	19,666	40,653	12.6	11.8	24.3	106	..	12.1	11.1	23.2	
12	Khulna	851,651	774,497	1,626,148	24,655	22,616	47,271	15.2	13.9	29.1	109	7.7	13.4	12.3	25.7	
	Rajshahi Division.															
13	Rajshahi	741,295	687,723	1,429,018	23,967	22,574	46,541	16.8	15.8	32.6	106	1.9	16.1	15.4	31.5	
14	Dinajpur	924,092	831,340	1,755,432	26,787	25,176	51,963	15.3	14.3	29.6	106	4.9	16.1	14.9	31.0	
15	Jalpaiguri	533,819	449,538	983,357	16,463	16,435	32,898	16.7	16.7	33.4	100	8.3	16.2	15.3	31.5	
16	Darjeeling	170,131	149,504	319,635	6,076	5,678	11,754	19.0	17.8	36.8	107	8.7	15.9	14.8	30.7	
17	Rangpur	1,356,594	1,238,191	2,594,785	38,978	36,110	75,088	15.0	13.9	28.9	107	3.6	13.9	12.8	26.7	
18	Bogra	557,174	529,245	1,086,419	13,830	12,929	26,759	12.7	11.9	24.6	106	3.7	12.4	11.5	23.9	
19	Pabna	739,027	706,627	1,445,654	20,048	16,706	36,754	13.9	11.5	25.4	120	..	12.2	10.8	23.0	
20	Malda	527,305	526,461	1,053,766	16,435	15,171	31,606	15.6	14.4	30.0	108	..	15.3	14.2	29.5	
	Dacca Division.															
21	Dacca	1,743,517	1,689,060	3,432,577	46,564	43,020	89,584	13.6	12.5	26.1	108	3.1	13.1	12.0	25.1	
22	Mymensingh	2,667,194	2,463,068	5,130,262	64,922	58,649	123,571	12.6	11.4	24.1	110	6.9	12.2	11.1	23.3	
23	Faridpur	1,206,348	1,155,867	2,362,215	35,720	32,761	68,481	15.1	13.9	29.0	109	3.0	14.3	12.8	27.1	
24	Bakarganj	1,505,338	1,433,712	2,939,050	41,853	38,696	80,549	14.2	13.2	27.4	108	11.1	13.2	12.1	25.3	
	Chittagong Division.															
25	Chittagong	872,888	924,150	1,797,038	26,830	23,548	50,378	14.9	13.1	28.0	113	6.3	13.7	12.2	25.9	
26	Noakhali	858,818	847,901	1,706,719	31,220	28,638	59,858	18.3	16.8	35.1	109	15.5	15.2	13.7	28.9	
27	Tippera	1,595,640	1,514,095	3,109,735	37,429	33,503	70,932	12.0	10.8	22.8	111	7.7	10.9	9.8	20.7	
	Total for the Bengal Presidency.	25,927,428	23,973,652	49,901,080	722,094	666,125	1,388,219	14.5	13.3	27.8	108	5.5	13.6	12.6	26.2	

Annual Form No. II.—BIRTHS and DEATHS registered in the districts of the Bengal Presidency during the year 1931.

1	2	3	4	5			6			7	8		
No.	Districts.	Area in square miles.	Average population per square mille.	Population (Census, 1931).			Births.			Deaths.		Number of male deaths to every 100 female deaths.	
				Male.	Female.	Total.	Male.	Female.	Total.	Birth rate per 1,000 of population.	Male.		Female.	Total.
Burdwan Division.													
1	Burdwan	2,705	583	814,891	760,808	1,575,699	22,192	20,407	42,599	17,957	17,296	35,253	103
2	Birbhum	1,699	558	472,687	474,867	947,554	18,305	17,394	35,699	13,983	13,844	27,827	101
3	Bankura	2,625	424	557,074	554,647	1,111,721	16,008	15,460	31,468	12,928	12,506	25,434	103
4	Midnapur	5,245	534	1,417,025	1,382,068	2,799,093	40,120	37,896	78,016	31,523	31,435	62,958	100
5	Hooghly	1,188	938	592,130	522,125	1,114,255	14,325	13,510	27,835	11,417	11,387	22,804	100
6	Howrah	522	2,105	599,075	499,792	1,098,867	14,717	13,491	28,208	10,563	9,762	20,325	108
Presidency Division.													
7	24-Parganas	5,257	516	1,464,953	1,248,921	2,713,874	36,943	33,566	70,509	23,375	21,448	44,823	109
8	Calcutta	33	36,265	814,948	381,786	1,196,734	13,794	12,683	26,477	16,908	13,654	30,562	123
9	Nadia	2,881	531	788,885	740,747	1,529,632	26,521	24,684	51,205	24,532	23,376	47,908	104
10	Murshidabad	2,091	656	683,483	687,194	1,370,677	26,405	25,158	51,563	20,108	18,178	38,286	110
11	Jessore	2,902	576	871,446	799,718	1,671,164	20,987	19,666	40,653	24,055	22,931	46,986	104
12	Khulna	4,689	347	851,651	774,497	1,626,148	24,655	22,616	47,271	17,598	17,260	34,858	101
Rajshahi Division.													
13	Rajshahi	2,609	548	741,295	687,723	1,429,018	23,967	22,574	46,541	22,684	21,239	43,923	106
14	Dinaipur	3,948	445	924,092	831,340	1,755,432	26,787	25,176	51,963	23,003	20,385	43,388	112
15	Jalpaiguri	2,932	335	533,819	449,538	983,357	16,463	16,435	32,898	12,788	11,923	24,711	107
16	Darjeeling	1,212	264	170,131	149,504	319,635	6,076	5,678	11,754	4,639	4,346	8,985	106
17	Rangpur	3,496	742	1,356,594	1,238,191	2,594,785	38,978	36,110	75,088	33,172	32,549	65,721	101
18	Bogra	1,384	785	557,174	529,245	1,086,419	13,830	12,929	26,759	11,552	11,182	22,734	103
19	Pabna	1,818	795	739,027	706,627	1,445,654	20,048	16,706	36,754	19,888	18,943	38,831	104
20	Malda	1,764	597	527,305	526,461	1,053,766	16,435	15,171	31,606	16,250	14,650	30,900	110
Dacca Division.													
21	Dacca	2,713	1,265	1,743,517	1,689,060	3,432,577	46,564	43,020	89,584	40,257	38,553	78,810	104
22	Mymensingh	6,237	823	2,667,194	2,463,068	5,130,262	64,922	58,649	123,571	46,076	42,395	88,471	108
23	Faridpur	2,356	1,003	1,206,348	1,155,867	2,362,215	35,720	32,761	68,481	31,745	29,725	61,470	106
24	Bakarganj	3,523	834	1,505,338	1,433,712	2,939,050	41,853	38,696	80,549	25,355	22,696	48,051	102
Chittagong Division.													
25	Chittagong	2,570	699	872,888	924,150	1,797,038	26,830	23,548	50,378	19,644	19,324	38,968	101
26	Noakhali	1,518	1,124	858,818	847,901	1,706,719	31,220	28,638	59,858	16,343	17,059	33,402	95
27	Tippera	2,597	1,197	1,595,640	1,514,095	3,109,735	37,429	33,503	70,932	24,457	22,466	46,923	108
Total for the Bengal Presidency.				25,927,428	23,973,652	49,901,080	722,094	666,125	1,388,219	572,800	540,512	1,113,312	105

1		2		9										10			
		Deaths per 1,000 of pupulation from—														Mean ratio of deaths per 1,000 during previous five years.	
No.	Districts.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.	All other causes.	All causes.			Male.	Female.	Total.		
										Male.	Female.	Total.					
Burdwan Division.																	
1	Burdwan	·6	·2	..	15·9	·8	1·4	·4	2·8	22·0	22·7	22·4	22·7	23·3	23·0		
2	Birbhum	·4	·2	..	22·7	·5	2·0	·4	3·2	29·6	29·1	29·4	25·9	25·0	25·4		
3	Bankura	·5	·4	..	14·1	1·3	1·8	·3	4·4	23·2	22·5	22·9	23·5	22·7	23·1		
4	Midnapur	1·1	·1	..	14·1	1·2	1·5	·5	3·9	22·2	22·7	22·5	22·0	22·0	22·0		
5	Hooghly	1·0	·4	..	11·4	1·5	2·8	·5	3·0	19·3	21·8	20·5	21·4	23·4	22·3		
6	Howrah	1·0	·9	..	5·5	2·8	3·6	·6	4·0	17·6	19·5	18·5	22·3	24·8	23·4		
Presidency Division.																	
7	24-Parganas	1·6	·1	..	9·1	·8	1·3	·5	3·1	15·9	17·2	16·5	19·4	20·4	19·8		
8	Calcutta	1·0	·7	·001	2·9	2·4	8·2	·6	9·6	20·7	35·8	25·5	23·2	40·8	28·8		
9	Nadia	·5	·04	..	24·9	·3	1·1	·6	3·8	31·1	31·5	31·3	29·7	30·2	30·0		
10	Murshidabad	·9	·1	..	21·1	·3	·5	·6	4·5	29·4	26·4	27·9	30·0	28·1	29·1		
11	Jessore	1·7	·04	..	22·4	·3	·8	·5	2·3	27·6	28·7	28·1	30·5	30·6	30·5		
12	Khulna	2·2	·01	..	12·4	·5	·9	·5	4·9	20·7	22·3	21·4	21·4	21·9	21·7		
Rajshahi Division.																	
13	Rajshahi	·7	·01	..	25·4	·3	·4	·6	3·2	30·6	30·9	30·7	32·8	33·7	33·2		
14	Dinajpur	·1	·1	..	20·4	·7	1·8	·6	1·0	24·9	24·5	24·7	30·4	30·5	30·5		
15	Jalpaiguri	·04	·03	..	15·8	1·4	3·3	·3	4·2	23·9	26·5	25·1	25·4	27·2	26·2		
16	Darjeeling	·01	·03	..	16·7	1·8	3·6	·4	5·5	27·3	29·1	28·1	26·5	27·2	26·8		
17	Rangpur	1·0	·3	..	20·0	·6	1·2	·2	1·9	24·4	26·3	25·3	24·2	24·5	24·3		
18	Bogra	2·5	·1	..	14·9	·4	·6	·4	1·9	20·7	21·1	20·9	19·2	19·4	19·3		
19	Pabna	4·8	·03	..	18·3	·4	·6	·4	2·2	26·9	26·8	26·9	23·7	23·6	23·7		
20	Malda	·4	·04	..	25·4	·2	·3	·3	2·5	30·8	27·8	29·3	28·8	25·9	27·3		
Dacca Division.																	
21	Dacca	3·5	·4	..	12·3	1·6	1·0	·3	3·8	23·1	22·8	23·0	19·8	19·3	19·5		
22	Mymensingh	2·0	·2	..	11·3	·4	·4	·2	2·7	17·3	17·2	17·2	17·6	17·9	17·8		
23	Faridpur	3·5	·1	..	16·5	1·1	1·1	·3	3·4	26·3	25·7	26·0	25·0	24·1	24·5		
24	Bakarganj	1·1	·01	..	9·7	·4	·2	·6	4·4	16·8	15·8	16·3	20·4	19·6	20·0		
Chittagong Division.																	
25	Chittagong	1·6	·2	..	17·0	·5	·5	·4	1·4	22·5	20·9	21·7	22·4	20·2	21·3		
26	Noakhali	1·3	·05	..	11·4	1·3	1·3	·6	3·6	19·0	20·1	19·6	19·5	19·9	19·7		
27	Tippera	1·6	·2	..	8·4	·9	·4	·2	3·3	15·3	14·8	15·1	14·7	14·4	14·6		
Total for the Bengal Presidency.		1·6	·2	·00002	14·7	·9	1·2	·4	3·3	22·1	22·5	22·3	22·6	22·8	22·7		

Annual Form No. III.—DEATHS registered in the districts of the Bengal Presidency during each month of the year 1931.

No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Burdwan Division.														
1	Burdwan ..	2,784	2,912	3,336	2,896	2,299	2,295	2,230	2,812	2,877	2,761	3,990	4,061	35,253
2	Birbhum ..	2,037	1,786	2,024	2,302	1,690	1,694	1,872	2,408	2,130	2,267	3,601	4,016	27,827
3	Bankura ..	2,053	2,455	2,212	2,251	2,034	1,591	1,962	2,455	1,942	1,699	2,342	2,438	25,434
4	Midnapur ..	5,249	6,193	5,143	4,598	3,838	3,553	4,427	5,046	4,574	5,728	6,902	7,707	62,958
5	Hooghly ..	1,922	1,835	2,203	1,917	1,475	1,253	1,311	1,794	1,815	2,010	2,517	2,752	22,804
6	Howrah ..	1,915	1,794	2,237	1,643	1,436	1,403	1,389	1,547	1,488	1,402	2,100	1,971	20,325
Presidency Division.														
7	24-Parganas ..	4,261	3,579	4,180	3,224	2,675	3,086	2,954	3,421	3,360	3,746	4,676	5,661	44,823
8	Calcutta ..	2,433	2,445	2,833	2,654	2,334	2,889	2,385	2,465	2,349	2,396	2,682	2,697	30,562
9	Nadia ..	4,711	4,076	3,625	4,156	3,229	2,524	2,357	3,413	3,480	4,244	5,853	6,240	47,908
10	Murshidabad ..	3,451	2,828	2,844	3,074	2,319	2,216	2,553	3,283	2,863	3,563	4,668	4,624	38,286
11	Jessore ..	5,295	3,184	3,811	4,115	2,921	2,375	2,447	2,463	2,941	4,039	6,198	7,197	46,986
12	Khulna ..	2,781	2,040	2,294	1,891	1,733	1,859	1,944	2,368	3,028	3,661	5,291	5,968	34,858
Rajshahi Division.														
13	Rajshahi ..	4,093	3,203	3,445	3,608	2,990	2,615	2,663	3,754	3,767	3,720	4,729	5,336	43,923
14	Dinaipur ..	4,031	3,384	3,270	3,904	2,875	2,873	3,183	3,628	4,107	3,479	4,506	4,148	43,388
15	Jalpaiguri ..	1,805	1,497	1,906	1,469	1,775	2,439	1,953	2,432	2,192	1,922	2,637	2,684	24,711
16	Darjeeling ..	505	544	536	601	769	925	964	1,019	761	760	838	763	8,985
17	Rangpur ..	5,813	4,806	5,175	5,215	5,313	5,570	4,786	5,820	5,660	5,836	6,707	5,020	65,721
18	Bogra ..	2,108	1,376	1,151	1,428	1,033	1,317	1,398	2,182	3,130	2,829	2,575	2,207	22,734
19	Pabna ..	3,734	2,609	2,887	3,519	3,365	2,151	1,884	1,851	3,666	4,983	4,180	4,002	38,831
20	Malda ..	3,496	2,409	2,684	1,781	2,066	3,520	1,646	2,503	1,876	3,568	2,006	3,345	30,900
Dacca Division.														
21	Dacca ..	7,369	5,038	5,521	6,582	4,738	3,731	3,710	4,154	6,000	8,366	12,185	11,416	78,810
22	Mymensingh ..	8,920	6,692	7,018	5,972	5,484	5,956	5,074	5,863	7,014	7,647	12,086	10,745	88,471
23	Faridpur ..	5,867	4,023	5,041	5,529	3,648	2,958	2,990	3,779	4,277	5,045	9,221	9,092	61,470
24	Bakarganj ..	6,520	5,081	4,926	3,970	3,165	3,545	2,767	2,953	2,890	2,736	4,255	5,243	48,051
Chittagong Division.														
25	Chittagong ..	3,222	2,730	3,376	3,113	3,310	3,964	3,776	3,617	2,989	2,482	3,226	3,163	38,968
26	Noakhali ..	4,273	2,567	2,239	2,216	2,253	2,203	3,099	1,988	1,915	2,086	2,583	5,980	33,402
27	Tippera ..	4,354	3,465	3,559	3,182	3,663	3,463	3,423	3,550	3,827	4,069	5,284	5,084	46,923
Total for the Bengal Pre-		105,002	84,551	89,476	86,810	74,430	73,968	71,147	82,568	86,918	97,044	127,838	133,560	1,113,312
Ratio of deaths per 1,000 of population.		2.1	1.7	1.8	1.7	1.5	1.5	1.4	1.7	1.7	1.9	2.6	2.7	22.3

1	2	3			4		5		6		7		
		Under one year.			1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		
		Male.	Female.	Total.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
No.	Districts.												
	Burdwan Division.												
	1	Burdwan ..	4,517	3,821	8,338	1,984	2,034	1,052	1,055	583	517	681	1,013
	2	Birbhum ..	3,958	3,398	7,356	2,098	2,311	1,150	1,258	471	429	444	584
	3	Bankura ..	3,020	2,800	5,820	1,381	1,414	786	820	445	382	568	654
	4	Midnapur ..	6,733	6,170	12,903	3,442	3,622	1,802	1,692	1,058	895	1,364	1,695
5	Hooghly ..	2,672	2,288	4,960	1,163	1,195	615	565	363	367	436	757	
6	Howrah ..	2,587	2,199	4,786	1,263	1,279	717	667	405	412	519	646	
	Presidency Division.												
	7	24-Parganas ..	5,422	4,390	9,812	2,760	2,705	1,626	1,483	1,103	924	1,133	1,564
	8	Caleutta ..	3,556	2,911	6,467	1,684	1,377	710	576	773	599	977	783
	9	Nadia ..	5,439	4,990	10,429	2,957	3,060	1,944	1,718	1,095	930	1,049	1,365
	10	Murshidabad ..	4,614	3,996	8,610	3,429	3,406	1,690	1,518	806	613	785	882
	11	Jessore ..	3,888	3,714	7,602	2,881	2,830	1,994	1,791	1,014	882	1,088	1,592
12	Khulna ..	4,707	4,004	8,711	2,098	2,053	1,155	999	566	561	708	1,355	
	Rajshahi Division.												
	13	Rajshahi ..	5,399	4,848	10,247	2,793	2,738	1,624	1,369	975	824	1,007	1,479
	14	Dinaipur ..	4,575	3,918	8,493	3,342	3,059	2,406	2,051	1,850	1,499	1,742	1,828
	15	Jalpaiguri ..	2,677	2,462	5,139	1,371	1,259	669	494	439	431	523	1,036
	16	Darjeeling ..	812	623	1,435	639	564	342	325	205	240	282	334
	17	Rangpur ..	9,482	8,326	17,808	4,519	4,737	3,091	2,980	1,946	1,906	1,793	2,526
18	Bogra ..	2,640	2,307	4,947	1,554	1,552	994	899	437	498	487	870	
19	Pabna ..	3,659	3,113	6,772	2,930	2,965	2,062	1,607	974	754	807	1,341	
20	Malda ..	2,902	2,604	5,506	3,093	2,828	1,574	1,397	822	605	759	805	
	Dacca Division.												
	21	Dacca ..	9,467	8,273	17,740	7,787	7,460	3,244	2,809	1,567	1,343	1,339	2,390
	22	Mymensingh ..	10,800	9,043	19,843	6,371	6,045	3,467	2,862	1,772	1,712	2,019	3,330
	23	Faridpur ..	6,677	5,526	12,203	6,083	5,648	2,344	2,082	1,225	1,057	1,103	1,945
24	Bakarganj ..	6,315	5,209	11,524	3,732	3,264	1,591	1,292	867	746	922	1,630	
	Chittagong Division.												
	25	Chittagong ..	4,287	3,472	7,759	3,283	3,243	1,596	1,412	851	587	752	1,153
	26	Noakhali ..	4,171	3,611	7,782	3,365	3,478	1,204	1,108	495	438	513	991
	27	Tipperra ..	4,764	3,796	8,560	3,862	3,419	1,698	1,656	1,069	1,039	1,346	1,736
Total for the Bengal Presidency.		129,740	111,812	241,552	81,864	79,545	43,147	38,485	24,276	21,190	25,146	36,284	
Population (Census of 1931).		826,639	830,086	1,656,725	3,002,029	3,089,675	3,547,000	3,149,068	3,103,425	2,773,630	2,271,722	2,533,311	
Ratio per 1,000 of population.		179.7*	167.8*	174.0*	27.3	25.7	12.2	12.2	7.8	7.6	11.1	14.3	

*Ratio per 1,000 of births.

1	2	8		9		10		11		12	
No.	Districts.	20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Burdwan Division.											
1	Burdwan ..	1,591	2,092	1,766	1,539	1,757	1,288	1,534	1,293	2,492	2,644
2	Birbhum ..	940	1,235	1,058	951	1,132	826	1,089	961	1,643	1,891
3	Bankura ..	1,148	1,380	1,294	1,007	1,294	906	1,205	1,068	1,787	2,075
4	Midnapur ..	3,028	3,989	3,406	3,057	3,231	2,383	2,960	2,817	4,499	5,115
5	Hooghly ..	1,016	1,526	1,300	1,143	1,191	857	1,036	877	1,625	1,812
6	Howrah ..	976	1,069	975	810	823	594	819	608	1,479	1,478
Presidency Division.											
7	24-Parganas ..	2,160	2,731	2,188	1,854	1,977	1,395	1,745	1,419	3,261	2,983
8	Caleutta ..	2,994	2,387	2,035	1,623	1,418	1,091	1,281	928	1,480	1,379
9	Nadia ..	2,222	2,755	2,522	2,136	2,498	1,833	2,075	1,818	2,731	2,771
10	Murshidabad ..	1,622	1,770	1,814	1,309	1,616	1,085	1,442	1,216	2,290	2,383
11	Jessore ..	2,572	3,387	2,758	2,533	2,642	1,875	2,285	1,802	2,933	2,525
12	Khulna ..	1,428	2,641	1,552	1,465	1,483	1,147	1,390	1,124	2,411	1,911
Rajshahi Division.											
13	Rajshahi ..	2,464	3,194	2,648	2,156	2,078	1,743	1,554	1,260	2,142	1,628
14	Dinajpur ..	2,283	2,760	2,195	1,929	1,842	1,318	1,353	1,041	1,415	982
15	Jalpaiguri ..	1,481	2,326	1,765	1,570	1,403	884	964	611	1,496	850
16	Darjeeling ..	646	713	564	509	368	304	307	232	474	502
17	Rangpur ..	2,614	3,492	2,575	2,409	2,486	1,991	2,073	1,838	2,593	2,344
18	Bogra ..	1,055	1,567	1,116	1,027	1,048	892	907	652	1,314	918
19	Pabna ..	1,823	2,723	2,136	1,736	1,832	1,321	1,405	1,160	2,260	2,223
20	Malda ..	1,616	1,778	1,575	1,249	1,352	1,009	992	884	1,565	1,491
Dacca Division.											
21	Dacca ..	2,850	4,403	3,013	2,786	2,921	2,311	2,773	2,192	5,296	4,586
22	Mymensingh ..	3,866	6,166	4,172	3,697	3,781	2,641	3,322	2,360	6,506	4,539
23	Faridpur ..	2,587	3,990	2,971	2,609	2,646	1,991	2,413	1,816	3,696	3,061
24	Bakarganj ..	2,054	3,189	2,249	2,148	2,139	1,382	1,951	1,394	3,535	2,442
Chittagong Division.											
25	Chittagong ..	1,703	2,889	1,593	1,765	1,555	1,161	1,630	1,355	2,394	2,287
26	Noakhali ..	1,119	2,313	1,021	1,313	1,044	921	1,116	960	2,295	1,926
27	Tippura ..	2,143	2,890	2,217	2,259	2,255	1,721	2,010	1,610	3,093	2,340
Total for the Bengal Presidency.		52,001	71,355	54,478	48,589	49,812	36,870	43,631	35,296	68,705	61,086
Population (Census of 1931).		4,749,178	4,736,437	3,840,115	3,076,228	2,427,332	1,886,856	1,295,516	1,107,087	864,472	791,274
Ratio per 1,000 of population.		10.9	15.1	14.2	15.8	20.5	19.5	33.7	31.9	79.5	77.2

No.	Districts.	Population according to Census of 1931.											
		Christians.			Hindus.			Mussalmans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Burdwan Division.													
1	Burdwan ..	2,966	2,474	5,440	639,304	599,568	1,238,872	152,442	140,029	292,471	73	29	102
2	Birbhum ..	335	295	630	317,330	319,095	636,425	125,985	126,923	252,908	11	8	19
3	Bankura ..	848	797	1,645	506,326	505,328	1,011,654	26,462	24,550	51,012	1	..	1
4	Midnapur ..	3,232	2,857	6,089	1,262,749	1,230,240	2,492,989	107,890	104,583	212,473	12	2	14
5	Hooghly ..	630	377	1,007	489,398	434,663	924,061	97,214	83,003	180,217	62	8	70
6	Howrah ..	2,145	1,585	3,730	469,363	391,077	860,440	126,795	106,903	233,698	87	13	100
Presidency Division.													
7	24-Parganas ..	11,103	8,860	19,963	945,206	797,181	1,742,387	487,774	425,459	913,233	371	117	488
8	Calcutta ..	26,243	21,241	47,484	547,846	274,447	822,293	229,311	81,844	311,155	2,420	601	3,021
9	Nadia ..	5,225	4,817	10,042	294,404	279,642	574,046	488,911	456,004	944,915	2	2	4
10	Murshidabad ..	169	229	398	294,703	294,848	589,551	378,983	382,599	761,582	7	5	12
11	Jessore ..	471	448	919	326,807	307,423	634,230	543,840	491,531	1,035,371	..	..	..
12	Khulna ..	1,333	1,134	2,467	427,032	389,588	816,620	422,185	382,724	804,909	24	3	27
Rajshahi Division.													
13	Rajshahi ..	793	736	1,529	171,347	154,671	326,018	559,514	523,591	1,083,105	12	2	14
14	Dinajpur ..	3,644	3,337	6,981	422,240	371,592	793,832	463,994	422,729	886,723	10	1	11
15	Jalpaiguri ..	8,021	6,746	14,767	360,721	303,294	664,015	128,429	107,522	235,951	4,170	3,333	7,503
16	Darjeeling ..	4,431	3,849	8,280	126,585	110,328	236,913	5,220	3,171	8,391	30,201	28,742	58,943
17	Rangpur ..	879	807	1,686	394,730	351,816	746,546	955,458	881,382	1,836,840	28	8	36
18	Bogra ..	240	236	476	94,526	83,103	177,629	461,007	444,631	905,638	2	..	2
19	Pabna ..	238	190	428	168,030	164,337	332,367	570,062	541,650	1,111,712	..	..	..
20	Malda ..	596	596	1,192	223,619	220,787	444,406	284,935	287,008	571,943	5	..	5
Dacca Division.													
21	Dacca ..	6,542	7,668	14,210	568,529	556,364	1,124,893	1,168,390	1,125,006	2,293,396	38	17	55
22	Mymensingh ..	5,586	5,178	10,764	619,114	555,214	1,174,328	2,033,595	1,893,957	3,927,552	4	1	5
23	Faridpur ..	3,868	3,669	7,537	426,748	420,316	847,064	775,462	731,695	1,507,157	10	3	13
24	Bakarganj ..	4,409	4,526	8,935	416,222	396,363	812,585	1,078,400	1,026,784	2,105,184	6,306	6,038	12,344
Chittagong Division.													
25	Chittagong ..	870	739	1,609	195,407	196,945	392,352	640,670	685,538	1,326,208	35,173	40,326	75,499
26	Noakhali ..	371	424	795	187,188	179,203	366,391	671,021	668,034	1,339,055	235	240	475
27	Tipperra ..	278	259	537	384,341	366,383	750,724	1,210,070	1,146,539	2,356,609	951	914	1,865
Total for the Bengal Presidency.		95,466	84,074	179,540	11,279,815	10,253,816	21,533,631	14,194,019	13,295,389	27,489,408	80,215	80,413	160,628

		3	4	
		Number of deaths registered among—		

Number of deaths registered among—

No.	Districts.	Mussalmans.			Buddhists.			Other classes.			Total.			
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
Burdwan Division.														
1	Burdwan ..	3,083	3,091	6,174	..	..	..	898	793	1,691	17,957	17,296	35,253
2	Birbhum ..	3,374	3,394	6,768	..	..	..	1,059	912	1,971	13,983	13,844	27,827
3	Bankura ..	641	524	1,165	..	..	..	1,007	910	1,917	12,928	12,506	25,434
4	Midnapur ..	2,174	2,060	4,234	..	..	..	1,991	1,781	3,772	31,523	31,435	62,958
5	Hooghly ..	1,918	1,879	3,797	..	2	4	326	304	630	11,417	11,387	22,804	
6	Howrah ..	2,336	2,207	4,543	..	..	..	10	3	13	10,563	9,762	20,325
Presidency Division.														
7	24-Parganas ..	8,574	7,865	16,439	3	3	6	11	11	22	23,375	21,448	44,823	
8	Calcutta ..	4,417	3,537	7,954	3	1	4	24	17	41	16,908	13,654	30,562	
9	Nadia ..	15,722	14,956	30,678	..	..	..	20	18	38	24,532	23,376	47,908
10	Murshidabad ..	11,059	9,866	20,925	..	..	..	198	183	381	20,108	18,178	38,286
11	Jessore ..	16,017	14,801	30,818	..	..	..	32	21	53	24,055	22,931	46,986
12	Khulna ..	9,408	9,332	18,740	..	..	..	16	16	32	17,598	17,260	34,858
Rajshahi Division.														
13	Rajshahi ..	18,220	17,019	35,239	..	..	..	401	366	767	22,684	21,239	43,923
14	Dinajpur ..	11,397	10,242	21,639	..	..	..	1,700	1,515	3,215	23,003	20,385	43,388
15	Jalpaiguri ..	3,404	3,187	6,591	..	33	59	3,203	3,119	6,322	12,788	11,923	24,711	
16	Darjeeling ..	165	124	289	831	712	1,543	383	360	743	4,639	4,346	8,985	
17	Rangpur ..	22,985	22,971	45,956	..	..	..	101	82	183	33,172	32,549	65,721
18	Bogra ..	9,695	9,536	19,231	..	..	..	186	147	333	11,552	11,182	22,734
19	Pabna ..	15,751	14,665	30,416	..	..	..	74	66	140	19,888	18,943	38,831
20	Malda ..	8,428	7,482	15,910	..	..	..	1,250	1,160	2,410	16,250	14,650	30,900
Dacca Division.														
21	Dacca ..	27,362	25,764	53,126	..	..	..	..	..	..	40,257	38,553	78,810
22	Mymensingh ..	33,904	30,888	64,792	..	..	..	..	330	701	46,076	42,395	88,471
23	Faridpur ..	21,591	19,986	41,577	..	..	..	..	..	..	31,745	29,725	61,470
24	Bakarganj ..	18,361	16,466	34,827	..	27	89	..	..	..	25,355	22,696	48,051
Chittagong Division.														
25	Chittagong ..	14,571	14,280	28,851	687	632	1,319	120	116	236	19,644	19,324	38,968	
26	Noakhali ..	13,064	13,620	26,684	3	3	6	..	..	..	16,343	17,059	33,402
27	Tippera ..	18,247	16,750	34,997	7	28	35	..	..	..	24,457	22,466	46,923
Total for the Bengal Presidency.		315,868	296,492	612,360	1,624	1,441	3,065	13,381	12,230	25,611	572,800	540,512	1,113,312	

1		2		Ratio of deaths per 1,000 of population.									
No.	Districts.	Christians.			Hindus.			Mussalmans.					
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
Burdwan Division.													
1	Burdwan	3.0	4.8	3.9	21.8	22.3	22.1	20.2	22.1	21.1			
2	Birbhum	20.9	13.6	17.5	30.1	29.9	30.0	26.8	26.7	26.8			
3	Bankura	18.9	11.3	15.2	22.2	21.9	22.1	24.2	21.3	22.8			
4	Midnapur	8.3	9.4	8.9	21.6	22.4	22.0	20.1	19.7	19.9			
5	Hooghly	9.5	7.9	8.4	18.7	21.2	19.9	19.7	22.6	21.1			
6	Howrah	..	..	..	17.5	19.3	18.3	18.4	20.6	19.4
Presidency Division.													
7	24-Parganas	7.4	9.4	8.3	15.5	16.9	16.2	17.6	18.5	18.0			
8	Calcutta	16.0	15.3	15.7	22.0	35.6	26.5	19.3	43.2	25.6			
9	Nadia	19.7	24.1	21.8	29.5	29.6	29.6	32.1	32.8	32.5			
10	Murshidabad	5.9	8.7	7.5	30.0	27.6	28.8	29.2	25.8	27.5			
11	Jessore	29.7	35.7	32.6	24.4	26.3	25.4	29.4	30.1	29.8			
12	Khulna	7.5	7.0	7.3	19.1	20.3	19.7	22.3	24.4	23.3			
Rajshahi Division.													
13	Rajshahi	17.6	20.4	19.0	23.6	24.8	24.2	32.6	32.5	32.5			
14	Dinajpur	17.3	12.9	15.2	23.3	23.1	23.2	24.6	24.2	24.4			
15	Jalpaiguri	8.2	9.5	8.8	16.9	18.2	17.5	26.5	29.6	27.9			
16	Darjeeling	14.9	18.7	16.7	31.6	39.1	34.4	31.6	39.1	34.4			
17	Rangpur	6.8	3.7	5.3	25.5	27.0	26.2	24.0	26.1	25.1			
18	Bogra	8.3	12.7	10.5	17.6	18.0	17.8	21.0	21.4	21.2			
19	Pabna	16.8	15.8	16.3	24.1	25.6	24.9	27.6	27.1	27.4			
20	Malda	..	6.7	3.3	29.4	27.2	28.3	29.6	26.1	27.8			
Dacca Division.													
21	Dacca	22.0	19.6	20.7	22.4	22.7	22.6	23.4	22.9	23.2			
22	Mymensingh	3.4	2.3	2.9	19.0	20.1	19.5	16.7	16.3	16.5			
23	Faridpur	23.5	19.9	21.8	23.6	23.0	23.3	27.8	27.3	27.6			
24	Bakarganj	8.8	10.4	9.6	16.6	15.5	16.1	17.0	16.0	16.5			
Chittagong Division.													
25	Chittagong	10.3	6.8	8.7	21.8	21.8	21.8	22.7	20.8	21.7			
26	Noakhali	21.6	7.1	13.8	17.5	19.1	18.3	19.5	20.4	19.9			
27	Tippera	..	3.9	1.9	16.1	15.5	15.8	15.1	14.6	14.8			
Total for the Bengal Presidency.				12.8	13.1	13.0	21.3	22.3	21.8	22.2	22.3		

1		2		Ratio of deaths per 1,000 of population.									
No.	Districts.	Buddhists.			Other classes.			Total.					
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
Burdwan Division.													
1	Burdwan ..	..	..	..	44.7	42.4	43.6	22.0	22.7	22.4
2	Birbhum ..	..	..	..	36.5	31.9	34.2	29.6	29.1	29.4
3	Bankura ..	..	..	..	43.0	38.0	40.4	23.2	22.5	22.9
4	Midnapur ..	..	..	..	46.1	40.1	43.1	22.2	22.7	22.5
5	Hooghly ..	32.2	250.0	57.1	67.5	74.6	70.8	19.3	21.8	20.5			
6	Howrah ..	..	..	..	14.6	14.0	14.5	17.6	19.5	18.5
Presidency Division.													
7	24-Parganas ..	8.1	25.6	12.3	.5	.6	.6	15.9	17.2	16.5			
8	Calcutta ..	1.2	1.7	1.3	2.6	4.6	3.2	20.7	35.8	25.5			
9	Nadla ..	..	..	..	58.3	63.8	60.8	31.1	31.5	31.3
10	Murshidabad ..	..	..	..	20.6	19.2	19.9	29.4	26.4	27.9
11	Jessore ..	..	..	..	97.5	66.5	82.3	27.6	28.7	28.1
12	Khulna ..	..	..	..	14.8	15.3	15.0	20.7	22.3	21.4
Rajshahi Division.													
13	Rajshahi ..	..	..	..	41.6	41.9	41.8	30.6	30.9	30.7
14	Dinajpur ..	..	..	..	49.7	45.0	47.4	24.9	24.5	24.7
15	Jalpaiguri ..	6.3	9.9	7.9	98.6	108.9	103.4	23.9	26.5	25.1			
16	Darjeeling ..	27.5	24.8	26.2	103.6	105.4	104.5	27.3	29.1	28.1			
17	Rangpur ..	..	..	..	18.4	19.6	18.9	24.4	26.3	25.3
18	Bogra ..	..	..	..	132.9	115.3	124.5	20.7	21.1	20.9
19	Pabna ..	..	..	..	106.2	146.6	122.0	26.9	26.8	26.9
20	Malda ..	..	..	..	68.9	64.2	66.5	30.8	27.8	29.3
Dacca Division.													
21	Dacca ..	..	..	..	..	..	..	23.1	22.8	23.0
22	Mymensingh ..	..	..	..	41.7	37.8	39.8	17.3	17.2	17.2
23	Faridpur ..	..	..	..	..	..	..	26.3	25.7	26.0
24	Bakarganj ..	9.8	4.5	7.2	..	..	..	16.8	15.8	16.3
Chittagong Division.													
25	Chittagong ..	19.5	15.7	17.5	156.2	192.7	172.2	22.5	20.9	21.7			
26	Noakhali ..	12.8	12.5	12.6	..	..	..	19.0	20.1	19.6
27	Tippera ..	7.4	30.6	18.8	..	..	..	15.3	14.8	15.1
Total for the Bengal Presidency.		20.2	17.9	19.1	48.1	47.0	47.6	22.1	22.5	22.3			

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the districts and towns of the Bengal Presidency during the year 1931.

No.	Districts and towns.	Population according to Census of 1931.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.					Total.	
									Suicide.		Wounds or accidents.	Snake-bite or killed by wild beasts.	Rabies.		
									Male.	Female.					
DISTRICTS (EXCLUDING TOWNS).															
Burdwan Division.															
1	Burdwan ..	1,466,238	901	367	..	24,659	1,183	2,014	32	32	355	125	11	555	
2	Birbhum ..	936,646	366	186	..	21,359	426	1,857	21	40	204	103	12	380	
3	Bankura ..	1,049,333	538	285	..	15,380	1,258	1,879	36	22	188	91	12	349	
4	Midnapur ..	2,723,902	3,055	229	..	39,187	3,144	4,029	54	56	806	316	100	1,332	
5	Hooghly ..	910,662	903	363	..	11,994	1,244	2,702	36	46	228	129	12	451	
6	Howrah ..	843,647	852	326	..	5,686	2,051	1,898	62	47	316	82	5	512	
Presidency Division.															
7	24-Parganas ..	2,175,265	3,919	165	..	22,156	1,270	2,499	126	170	560	293	29	1,178	
8	Nadia ..	1,424,801	682	65	..	37,541	417	1,387	85	128	380	276	45	914	
9	Murshidabad ..	1,287,614	1,153	150	..	28,160	260	510	52	41	352	313	19	777	
10	Jessore ..	1,650,372	2,783	62	..	37,247	541	1,383	98	137	308	217	31	791	
11	Khulna ..	1,590,833	3,447	20	..	19,896	866	1,336	68	103	413	235	24	843	
Rajshahi Division.															
12	Rajshahi ..	1,393,636	1,000	12	..	36,172	463	471	69	105	335	341	16	866	
13	Dinajpur ..	1,736,276	140	182	..	35,728	1,237	3,149	35	39	484	355	154	1,067	
14	Jalpaiguri ..	964,395	42	35	..	15,522	1,369	3,138	14	14	168	60	4	260	
15	Darjeeling ..	290,999	3	10	..	5,003	556	1,007	15	5	58	7	33	118	
16	Rangpur ..	2,565,557	2,552	844	..	51,771	1,671	3,218	19	23	291	111	18	462	
17	Bogra ..	1,067,321	2,728	62	..	16,162	514	594	39	68	234	130	7	478	
18	Pabna ..	1,391,283	6,827	40	..	26,262	533	809	21	42	341	190	25	619	
19	Malda ..	1,018,254	412	46	..	26,517	108	270	30	34	126	148	11	349	
Dacca Division.															
20	Dacca ..	3,259,870	11,755	1,307	..	41,768	4,927	2,516	45	52	506	156	35	794	
21	Mymensingh ..	4,990,559	10,267	890	..	57,138	2,095	1,880	107	95	761	168	61	1,192	
22	Faridpur ..	2,312,701	8,154	276	..	38,761	2,455	2,602	33	79	371	191	44	718	
23	Bakarganj ..	2,871,941	3,279	41	..	28,372	898	479	57	98	1,276	178	8	1,617	
Chittagong Division.															
24	Chittagong ..	1,738,864	2,785	423	..	30,320	857	875	15	15	713	50	14	807	
25	Noakhali ..	1,693,656	2,136	86	..	19,473	2,232	2,155	19	16	904	92	12	1,043	
26	Tipperra ..	3,034,870	5,061	655	..	25,925	2,695	1,251	19	42	538	44	11	654	
Total of districts ..			75,740	7,127	..	718,159	35,270	45,908	1,207	1,549	11,216	4,401	753	19,126	

Ratio of deaths per 1,000 of population.

Ratio of deaths per 1,000 of population.												
N.	Districts and towns.	13										
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1 No.	2 Districts and towns.	3 Population according to Census of 1931.	4 Cholera.	5 Small-pox.	6 Plague.	7 Fever.	8 Dysentery and diarrhoea.	9 Respira- tory diseases.	10 Injury.					
									Suicide.		Snake- bite or killed by wild beasts.	Rabies.	Total	
									Male.	Female.				
TOWNS.														
Burdwan district.														
1	Burdwan	39,618	26	4	..	151	122	132	3	1	11	2	..	17
2	Kalna ..	9,567	5	1	..	131	26	28	1	..	7	1	..	9
3	Katwa	7,772	5	2	..	33	8	12	..	4	2	..	..	6
4	Dainhat	4,845	..	..	..	40	1	15	..	..	..	..	..	..
5	Raniganj	16,373	9	..	..	87	20	69	..	..	5	..	..	5
6	Asansol	31,286	17	4	..	42	12	19	7	..	14	2	..	23
Birbhum district.														
7	Suri ..	10,908	2	4	..	118	7	38	1	..	5	..	1	7
Bankura district.														
8	Bankura	31,703	6	9	..	73	47	47	..	..	2	2	..	4
9	Bishnupur	19,696	7	119	..	133	62	57	3	..	2	1	..	6
10	Sonamukhi	10,989	5	41	..	74	47	60	1	..	4	2	1	8
Midnapur district.														
11	Midnapur	32,021	2	1	..	63	57	51	2	1	6	1	..	10
12	Ghatal	12,400	4	2	..	103	51	52	..	..	1	..	1	2
13	Kharar	5,736	..	..	..	31	25	26	..	..	..	..	1	1
14	Chandrakona	6,016	..	..	..	47	28	47	..	..	1	2	1	4
15	Ramjibanpur	6,230	..	..	..	31	53	67	..	..	9	..	..	9
16	Khirpai	3,693	..	..	..	22	31	36	1	..	..	..	1	2
17	Tamluk	9,095	3	..	..	24	17	10	..	..	1	..	..	1
Hooghly district.														
18	Hooghly-Chinsura	32,634	10	30	..	205	53	98	1	2	14	2	1	20
19	Bansberia	14,221	17	8	..	83	7	19	1	..	..	4	..	5
20	Arambagh	7,461	6	..	..	56	17	28	..	..	3	..	..	3
21	Serampur	39,056	41	..	..	87	111	80	1	1	14	..	1	17
22	Rishra-Konnagar	26,868	25	53	..	48	29	43	..	..	4	..	..	4
23	Uttarpara	9,350	17	3	..	20	16	24	2	..	3	..	..	5
24	Kotrung	7,160	19	5	..	21	8	16	1	2	..	..	..	3
25	Baldyabati	18,486	18	5	..	63	38	25	1	1	2	1	..	5
26	Bhadreswar	22,992	13	5	..	71	36	29	1	1	4	1	..	7
27	Champdani	25,365	8	2	..	37	27	34	1	..	..	..	..	1

Ratio of deaths per 1,000 of population.													
No.	Districts and towns.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respira- tory diseases.	Injury.	All other causes.	From all causes.	
												For the year.	Mean of previous five years.
TOWNS.													
Burdwan district													
1	Burdwan	146	598	.6	.1	..	3.8	3.1	3.3	.4	3.7	15.1	17.8
2	Kalna ..	65	265	.5	.1	..	13.7	2.7	2.9	.9	6.8	27.7	30.3
3	Katwa	13	79	.6	.2	..	4.2	1.0	1.5	.8	1.7	10.2	12.3
4	Dainhat	8	64	..	..	..	8.2	.2	3.1	..	1.6	13.2	18.2
5	Raniganj	152	342	.5	..	..	5.3	1.2	4.2	.3	9.3	20.9	19.1
6	Asansol	212	329	.5	.1	..	1.3	.4	.6	.7	6.8	10.5	11.7
Birbhum district.													
7	Suri ..	20	196	.2	.4	..	10.8	.7	3.5	.6	1.8	18.0	77.9
Bankura district.													
8	Bankura	159	345	.2	.3	..	2.3	1.4	1.5	.1	5.0	10.9	8.9
9	Bishnupur	90	474	.3	6.0	..	6.7	3.1	2.9	.3	4.6	24.1	20.3
10	Sonamukhi	123	358	.4	3.7	..	6.7	4.2	5.5	.7	11.2	32.6	23.0
Midnapur district.													
11	Midnapur	119	303	.1	.03	..	2.0	1.8	1.6	.3	3.7	9.5	11.9
12	Ghatal	77	291	.3	.2	..	8.3	4.1	4.2	.2	6.2	23.5	19.2
13	Kharar	40	123	..	..	..	5.4	4.4	4.5	.2	7.0	21.4	22.8
14	Chandrakona	44	170	..	..	..	7.8	4.7	7.8	.7	7.3	28.2	33.4
15	Ramjibanpur	24	184	..	..	..	5.0	8.5	10.7	1.4	3.8	29.5	27.3
16	Khurpai	1	92	..	..	..	5.9	8.4	9.7	.5	.3	24.9	27.6
17	Tamluk	43	98	.3	..	..	2.6	1.8	1.1	.1	4.7	10.8	15.1
Hooghly district.													
18	Hooghly-Chinsura	265	681	.3	.9	..	6.3	1.6	3.0	.6	8.1	20.9	28.2
19	Bansberia	24	163	1.2	.6	..	5.8	.4	1.3	.3	1.7	11.5	10.8
20	Arambagh	41	151	.8	..	..	7.5	2.2	3.7	.4	5.5	20.2	23.6
21	Serampur	143	494	1.0	.4	..	2.2	2.8	2.0	.4	3.7	12.6	14.2
22	Rishra-Konnagar	84	286	.9	2.0	..	1.8	1.1	1.6	.1	3.1	10.6	11.8
23	Uttarpara	39	124	1.8	.3	..	2.1	1.7	2.6	.5	4.2	13.3	19.0
24	Kotrung	26	98	2.6	.7	..	2.9	1.1	2.2	.4	3.6	13.7	16.2
25	Baldyabati	99	253	1.0	.3	..	3.4	2.0	1.3	.3	5.3	13.7	18.3
26	Bhadreswar	106	267	.6	.2	..	3.1	1.6	1.3	.3	4.6	11.6	16.7
27	Champdani	113	222	.3	.1	..	1.5	1.0	1.3	.04	4.4	8.7	11.0

1 No.	2 Districts and towns.	3 Population according to Census of 1931.	4 Cholera.	5 Small-pox.	6 Plague.	7 Fever.	8 Dysentery and diarrhoea.	9 Respira- tory diseases.	10 Injury.					Total.
									Suicide.		Snake- bite or killed by wild beasts.	Rabies.	Wounds or acci- dents.	
									Male.	Female.				
28	TOWNS. Howrah district.	224,873	208	667	..	327	1,033	2,056	12	12	86	8	120	
29		30,347	31	9	..	86	23	61	..	1	3	..	4	
30	24-Parganas district.	39,499	58	2	..	198	143	121	1	1	6	1	9	
31		24,476	14	18	..	72	29	58	..	..	2	..	2
32		24,183	22	..	..	126	78	30	2	2	10	..	22
33		37,050	56	3	..	127	142	137	..	2	6	1	9	
34		30,354	38	4	..	105	72	62	..	1	9	..	11	
35		11,433	7	..	..	45	22	38	..	1	..	..	1
36		6,483	8	..	..	19	3	9	..	1	1	..	2
37		9,755	27	4	..	44	25	32	..	..	2	..	2
38		4,535	3	..	..	23	21	10	..	..	2	..	3
39		18,471	23	8	..	38	31	44	..	..	3	1	3
40		5,998	1	..	..	16	7	10	..	..	3	..	3
41		25,395	6	1	..	28	12	36	..	1	3	..	4	
42		11,699	9	3	..	26	27	46	..	..	2	..	4
43		16,258	16	2	..	43	31	39	..	..	3	1	10
44		49,584	8	2	..	513	33	13	..	..	7	1	2
45		14,033	6	2	..	39	7	4	1	1	1	..	5	
46		30,908	6	25	..	36	13	40	..	1	2	..	2	
47		16,770	6	10	..	15	9	21	..	1	1	..	2	
48		15,005	6	..	..	86	12	24	..	..	2	1	15
49		84,975	..	66	..	461	79	114	2	2	10	..	..
50		8,672	38	..	..	59	3	7	..	..	..	1	8
51		4,525	2	..	..	35	6	17	2	2	2	1	..
52		Gobardanga	21,237	29	..	119	41	85	..	1	8	..	12	
53		Basirhat	13,677	53	1	134	49	25	..	1	..	3	4	
54		Baduria	8,234	4	..	52	11	12	..	..	4	1	7
55		Taki .. Dum-Dum	5,350	..	26	..	8	..	4
56	City of Calcutta. Calcutta	1,196,734	1,235	891	1	3,490	2,958	9,765	26	15	640	22	704	

1		2		11		12		13						
				Ratio of deaths per 1,000 of population.										
No.	Districts and towns.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox	Plague.	Fever.	Dysentery and diarrhoea.	Respira- tory diseases.	Injury.	All other causes.	From all causes.		
												For the year.	Mean of previous five years.	
28	Howrah	1,842	6,253	.9	3.0	..	1.4	4.5	9.1	.5	8.2	27.8	30.6	
29	Bally	46	260	1.0	.3	..	2.8	.8	2.0	.1	1.5	8.6	10.8	
24-Parganas district.														
30	South Suburban	217	748	1.5	.05	..	5.0	3.6	3.1	.2	5.5	18.9	19.2	
31	Tollyganj	59	252	.6	.7	..	2.9	1.2	2.4	.1	2.4	10.3	14.3	
32	Budge-Budge	50	328	.9	..	..	5.2	3.2	1.2	.9	2.1	13.6	20.8
33	Baranagar	211	685	1.5	.1	..	3.4	3.8	3.7	.2	5.7	18.5	21.3	
34	Kamarhati	60	352	1.2	.1	..	3.4	2.3	2.0	.4	2.0	11.6	12.6	
35	Rajpur	38	151	.6	..	..	3.9	1.9	3.3	.1	3.3	13.2	18.6
36	Baruipur	12	53	1.2	..	..	2.9	.4	1.4	.3	1.8	8.2	9.6
37	Jaynagar	1	135	2.8	.4	..	4.5	2.5	3.3	.2	.1	13.8	16.6	
38	North Dum-Dum	14	74	.7	..	..	5.1	4.6	2.2	.7	3.1	16.3	26.9
39	South Dum-Dum	80	227	1.2	.4	..	2.0	1.7	2.4	.2	4.3	12.3	14.1	
40	Khardah	18	55	.2	..	..	2.7	1.1	1.7	.5	3.0	9.2	13.5
41	Barrackpur	31	117	.2	.04	..	1.1	.4	1.4	.1	1.2	4.6	6.1	
42	Panihati	85	200	.8	.3	..	2.2	2.3	3.9	.3	7.3	17.1	20.4	
43	North Barrackpur	69	204	1.0	.1	..	2.6	1.9	2.4	.2	4.2	12.5	14.9	
44	Titagarh	35	614	.2	.04	..	10.3	.7	.3	.2	.7	12.4	18.1	
45	Garulia	22	82	.4	.1	..	2.8	.5	.3	.1	1.6	5.8	9.2	
46	Naihati	71	196	.2	.8	..	1.2	.5	1.3	.2	2.3	6.3	9.1	
47	Halisahar	36	99	.4	.6	..	.9	.8	1.6	.1	2.1	5.9	7.0	
48	Kanchrapara	18	142	..	..	..	5.7	.8	1.3	.1	2.2	9.5	9.0
49	Bhatpara	187	960	.4	.8	..	5.4	.9	1.3	.2	2.2	11.3	12.7	
50	Barasat	7	76	..	..	..	6.8	.3	.8	..	.8	8.8	9.6
51	Gobardanga	13	81	.4	..	..	7.7	1.3	3.7	.1	2.9	17.9	20.3
52	Basirhat	132	418	1.4	..	..	5.6	1.9	4.0	.6	6.2	19.6	20.5
53	Baduria	..	266	3.9	.1	..	9.8	3.6	1.8	.3	..	19.4	11.8	
54	Taki	37	123	.5	.4	..	6.3	1.3	1.4	.8	4.5	14.9	16.9	
55	Dum-Dum	7	45	..	.9	..	1.5	..	.7	..	1.3	8.4	1.7	
City of Calcutta.														
56	Calcutta	11,518	30,562	1.0	.7	.001	2.9	2.4	8.2	.6	9.6	25.5	28.8	

1	2	3	4	5	6	7	8	9	10 Injury.				
No.	Districts and towns.	Population according to Census of 1931.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Suicide.		Snake-bite or killed by wild beasts.	Rabies.	Total.
									Male.	Female.			
TOWNS.													
Nadia district.													
57	Krishnagar	24,284	6	1	..	108	8	42	..	..	..	..	1
58	Nabadwip	18,861	34	1	..	58	35	27	..	..	1	..	7
59	Ranaghat	11,395	1	..	..	54	8	24	..	..	..	..	7
60	Birnagar	2,341	4	..	..	25	..	7	..	..	..	..	..
61	Santipur	24,992	26	2	..	182	60	102	1	1	1	1	..
62	Chakdaha	3,986	2	..	..	49	2	..	..	..	..	..	..
63	Kushtia	9,405	4	2	..	33	17	..	..	..	1	..	6
64	Kumarkhali	3,362	..	..	..	44	11	17	..	..	1	..	3
65	Meherpur	6,205	..	..	..	41	5	19	..	..	..	..	7
Murshidabad district.													
66	Berhampur	27,403	6	..	..	282	42	66	2	4	2	1	17
67	Murshidabad	9,483	5	..	..	131	13	12	1	..	..	1	2
68	Jiaganj-Azimganj	10,998	17	..	..	58	17	24	..	..	1	..	3
69	Kandi	12,616	1	..	..	58	10	23	..	..	..	..	3
70	Jangipur	12,796	18	..	..	120	7	8	..	..	1	..	3
71	Dhulian	9,767	1	..	..	119	2	6	..	..	..	..	2
Jessore district.													
72	Jessore	11,356	1	..	..	44	5	27	1	..	..	..	5
73	Kotchandpur	6,115	3	1	..	83	4	5	1	..	1	..	5
74	Mahespur	3,321	..	..	..	42	8	13	1	1	..	..	2
Khulna district.													
75	Khulna	19,120	19	2	..	115	23	15	..	1	3	1	11
76	Satkhira	11,241	44	..	..	88	14	35	..	1	1	..	2
77	Debhatta	4,954	5	..	..	30	4	12	..	..	..	..	1
Rajshahi district.													
78	Rajshahi	27,004	6	..	..	103	37	45	..	1	..	2	12
79	Nator ..	8,318	11	..	..	54	8	17	..	1	1	..	3
Dinaipur district.													
80	Dinaipur	19,156	3	2	..	86	34	60	1	1	..	..	6

Ratio of deaths per 1,000 of population.

No.	Districts and towns.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.	All other causes.	From all causes.	
												For the year.	Mean of previous five years.
TC V/NS.													
Nadia district.													
57	Krishnagar	157	323	.2	.04	..	4.4	.3	1.7	.04	6.5	13.3	11.2
58	Nabadwip	102	264	1.8	.05	..	3.1	1.8	1.4	.4	5.4	14.0	18.4
59	Ranaghat	30	124	.1	..	..	4.7	.7	2.1	.6	2.6	10.9	14.3
60	Birnagar	19	55	1.7	..	..	10.7	..	3.0	..	8.1	23.5	27.8
61	Santipur	177	560	1.0	.1	..	7.3	2.4	4.1	.4	7.1	22.4	28.2
62	Chakdaha	5	58	.5	..	..	12.3	.4	..	..	1.2	14.5	26.3
63	Kushtla	25	102	.4	.2	..	3.5	1.7	1.6	.6	2.7	10.8	12.6
64	Kumarkhali	2	77	..	..	..	13.1	3.3	5.0	.9	.6	22.9	25.9
65	Meherpur	13	85	..	..	..	6.6	.8	3.1	1.1	2.1	13.7	14.2
Murshidabad district.													
66	Berhampur	134	547	.2	..	..	10.3	1.6	2.4	.6	4.9	20.0	23.1
67	Murshidabad	5	168	.5	..	..	13.8	1.3	1.3	.2	.5	17.7	23.5
68	Jiaganj-Azimganj	86	205	1.5	..	..	5.3	1.5	2.2	.3	7.8	18.6	22.4
69	Kandi	60	155	.1	..	..	4.6	.8	1.8	.2	4.7	12.3	18.3
70	Jangipur	..	156	1.4	..	..	9.4	.5	.6	.2	..	12.2	12.2
71	Dhulian	12	142	.1	..	..	12.2	.2	.6	.2	1.2	14.5	21.6
Jessore district.													
72	Jessore	34	116	.1	..	..	3.9	.4	2.4	.4	3.0	10.2	18.1
73	Kotchandpur	20	121	.5	.2	..	13.6	.7	.8	.8	3.3	19.8	23.5
74	Mahepur	13	78	..	..	..	12.6	2.4	3.9	.6	3.9	23.5	30.7
Khulna district.													
75	Khulna	65	250	1.0	.1	..	6.0	1.2	.8	.6	3.4	13.1	15.2
76	Satkhira	68	251	3.9	..	..	7.8	1.2	3.1	.2	6.0	22.3	21.5
77	Debhatta	..	52	1.0	..	..	6.0	.8	2.4	.2	..	10.5	15.5
Rajshahi district.													
78	Rajshahi	149	352	.2	..	..	3.8	1.3	1.7	.4	5.5	13.0	16.3
79	Nator ..	38	131	1.3	..	..	6.5	.9	2.0	.4	4.6	15.7	21.3
Dinalpur district.													
80	Dinalpur	50	241	.1	.1	..	4.5	1.8	3.1	.3	2.6	12.6	9.6

1 No.	2 Districts and towns.	3 Population according to Census of 1931.	4 Cholera.	5 Small-pox.	6 Plague.	7 Fever.	8 Dyson- tery and diarrhœa.	9 Respira- tory diseases.	10 Injury.				
									Suicide.		Snake- bite or killed by wild beasts.	Rabies.	Total.
									Male.	Female.			
TOWNS.													
Jalpaiguri district.													
81	Jalpaiguri ..	18,962	2	..	..	61	32	73	..	11	2	..	13
Darjeeling district.													
82	Darjeeling ..	21,185	..	..	..	212	24	117	2	1	1	..	13
83	Kurseong ..	7,451	..	..	..	131	5	26	..	..	..	..	..
Rangpur district.													
84	Rangpur ..	20,749	5	..	..	62	31	19	..	1	..	..	1
85	Gaibandha ..	8,479	6	..	..	22	5	11	..	..	1	..	1
Bogra district.													
86	Bogra ..	14,819	5	..	..	33	13	7	..	..	..	..	..
87	Sherpur ..	4,279	3	..	..	39	7	16	..	..	..	..	..
Pabna district.													
88	Pabna ..	21,904	7	..	..	51	11	10	..	1	1	..	2
89	Sirajganj ..	32,467	101	1	..	222	50	29	..	27	..	..	30
Malda district.													
90	English Bazar ..	16,907	2	..	..	104	39	33	1	1	..	1	5
91	Old Malda ..	2,779	3	..	..	38	4	12	..	1	..	..	1
92	Nawabganj ..	15,826	34	..	..	148	63	26	..	..	..	..	..
Dacca district.													
93	Dacca ..	138,518	220	2	..	407	448	949	6	9	1	2	107
94	Narayanganj ..	34,189	118	..	..	214	86	30	4	19	..	..	23
Mymensingh district.													
95	Mymensingh ..	30,480	12	..	..	183	33	42	1	2	..	..	12
96	Muktagacha ..	6,131	7	..	..	13	1	3	..	1	..	..	1
97	Netrakona ..	10,980	9	..	..	48	16	3	1	13	..	..	16

Ratio of deaths per 1,000 of population.													
1 No.	2 Districts and towns.	11 All other causes.	12 Total deaths from all causes.	13									
				Cholera	Small-pox.	Plague.	Fever.	Dysen- tery and diarrhoea.	Respira- tory diseases.	Injury.	All other causes.	From all causes.	
												For the year.	Mean of previous five years.
TOWNS.													
81	Jalpaiguri district. Jalpaiguri ..	78	259	.1	..	..	3.2	1.7	3.8	.7	4.1	13.7	12.8
82 83	Darjeeling district. Darjeeling .. Kurseong ..	217 77	583 239	.. ..	.. ..	.. ..	10.0 17.6	1.2 .7	5.5 3.5	.6 ..	10.2 10.3	27.5 32.1	20.1 34.2
84 85	Rangpur district. Rangpur .. Gaibandha ..	65 18	183 63	.2 .7	.. ..	.. ..	3.0 2.6	1.4 .6	.9 1.3	.04 .1	3.1 2.1	8.8 7.4	12.4 7.7
86 87	Bogra district. Bogra .. Sherpur ..	33 11	91 76	.3 .7	.. ..	.. ..	2.2 9.1	.9 1.6	.5 3.7	.. ..	2.2 2.6	6.1 17.8	7.8 17.3
88 89	Pabna district. Pabna .. Sirajganj ..	54 112	135 545	.3 3.1	.. ..	.. ..	2.3 6.8	.5 1.5	.4 .9	.1 .9	2.5 3.4	6.2 16.8	10.4 15.0
90 91 92	Malda district. English Bazar .. Old Malda .. Nawabganj ..	66 4 115	249 62 386	.1 1.1 2.1	.. .. ..	.. .. ..	6.1 13.7 9.3	2.3 1.4 3.9	1.9 4.3 1.6	.3 .4 ..	3.9 1.4 7.3	14.7 22.3 24.4	15.9 33.5 20.1
93 94	Dacca district. Dacca .. Narayanganj ..	1,223 422	3,356 893	1.6 3.4	.01 ..	.. ..	2.9 6.3	3.3 2.5	6.8 .9	.8 .7	8.8 12.3	24.2 26.1	25.2 27.1
95 96 97	Mymensingh district. Mymensingh .. Muktagacha .. Netrakona ..	124 22 42	406 47 134	.4 1.1 .8	.. .. ..	.. .. ..	6.0 2.1 4.4	1.1 .2 1.5	1.4 .5 .3	.4 .2 1.4	4.1 3.6 3.8	13.3 7.7 12.2	13.9 12.4 16.6

1	2	3	4	5	6	7	8	9	10				
No.	Districts and towns.	Population according to Census of 1931.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respira- tory diseases.	Injury.				
									Suicide.	Snake- bite or killed by wild beasts.	Rabies.	Total.	
									Male.	Female.	Wounds or acci- dents.		
TOWNS.													
Mymensingh district.													
98	Jamalpur ..	23,077	9	..	..	139	17	36	..	1	9	1	11
99	Sherpur ..	19,547	12	..	..	127	25	22	..	..	2	1	3
100	Kishoreganj ..	15,437	4	1	..	50	28	35	..	..	1	..	1
101	Bajitpur ..	11,650	14	..	..	30	5	4	..	..	..	..	..
102	Tangail ..	16,082	36	..	..	88	20	27	..	..	2	..	4
103	Gauripur ..	6,319	..	..	..	10	3	3	1	..	1	..	2
Faridpur district.													
104	Faridpur ..	15,516	28	..	..	75	6	17	1	1	3	1	6
105	Madaripur ..	26,894	65	..	..	56	24	12	1	..	2	..	3
106	Rajbari ..	7,104	10	..	..	97	15	13	..	..	..	..	..
Bakarganj district.													
107	Barisal ..	35,716	36	1	..	197	57	36	1	2	6	3	12
108	Jhalakati ..	6,496	16	..	..	7	5	3	..	..	1	..	1
109	Nalchiti ..	1,946	..	..	..	5	3	5	..	..	..	..	..
110	Pirojpur ..	10,959	15	..	..	50	8	6	..	..	7	1	8
111	Patuakhali ..	6,434	7	1	..	17	3	4	..	..	1	..	1
112	Bhola ..	5,558	..	..	..	6	2	3	..	..	6	..	6
Chittagong district.													
113	Chittagong ..	53,156	80	6	..	139	58	79	4	..	7	..	11
114	Cox's Bazar ..	5,018	..	..	..	43	1	3	..	..	..	..	..
Noakhali district.													
115	Noakhali ..	13,063	16	..	..	42	22	5	..	..	4	..	4
Tippera district.													
116	Comilla ..	31,365	16	..	..	42	19	8	1	..	8	1	10
117	Brahmanbaria ..	26,662	3	..	..	119	35	8	1	..	1	..	2
118	Chandpur ..	16,838	36	..	..	27	20	5	..	..	5	1	6
Total of Towns ..		3,511,585	3,333	2,080	1	13,625	7,494	16,443	116	90	1,259	74	1,592
Total for the Bengal Presidency.		49,901,080	79,073	9,207	1	731,784	42,764	62,351	1,323	1,639	12,475	806	20,718

1	2	11	12	13 Ratio of deaths per 1,000 of population.										
No.	Districts and towns.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague	Fever.	Dysentery and diarrhoea.	Respira- tory diseases.	Injury.	All other causes.	From all causes.		
												For the year.	Mean of previous five years.	
TOWNS.														
Mymensingh district.														
98	Jamalpur	104	316	·4	..	..	6·0	·7	1·6	·5	4·5	13·7	14·5
99	Sherpur	125	314	·6	..	..	6·5	1·3	1·1	·1	6·4	16·1	16·6
100	Kishoreganj	25	144	·3	·1	..	3·2	1·8	2·3	·1	1·6	9·3	13·3	
101	Bajitpur	33	86	1·2	..	..	2·6	·5	·3	..	2·8	7·4	11·2
102	Tangail	65	240	2·2	..	..	5·5	1·3	1·7	·2	4·0	14·9	13·1
103	Gauripur	2	20	..	..	..	1·6	·5	·5	·3	·3	3·2	4·7
Faridpur district.														
104	Faridpur	59	191	1·8	..	..	4·8	·4	1·1	·4	3·8	12·3	14·8
105	Madaripur	75	235	2·4	..	..	2·1	·9	·4	·1	2·8	8·7	13·7
106	Rajbari	10	145	1·4	..	..	13·6	2·1	1·8	..	1·4	20·4	23·9
Bakarganj district.														
107	Barisal	79	418	1·0	·03	..	5·5	1·6	1·0	·3	2·2	11·7	12·1	
108	Jhalakati	26	58	2·5	..	..	1·1	·8	·5	·1	4·0	8·9	11·5
109	Nalchiti	1	14	..	..	..	2·6	1·5	2·6	..	·5	7·2	11·3
110	Pirojpur	90	177	1·4	..	..	4·6	·7	·5	·7	8·2	16·1	14·1
111	Patuakhali	16	49	1·1	·1	..	2·6	·4	·6	·1	2·5	7·6	11·3	
112	Bhola ..	18	35	..	..	..	1·1	·4	·5	1·1	3·2	6·3	5·4
Chittagong district.														
113	Chittagong	344	717	1·5	·1	..	2·6	1·1	1·5	·2	6·5	13·5	12·8	
114	Cox's Bazar	14	61	..	..	..	8·6	·2	·6	..	2·8	12·1	14·1
Noakhali district.														
115	Noakhali	47	136	1·2	..	..	3·2	1·6	·4	·3	3·6	10·4	8·3
Tippera district.														
116	Comilla	94	189	·5	..	..	1·3	·6	·2	·3	3·0	6·0	5·1
117	Brahmanbaria	162	329	·1	..	..	4·5	1·3	·3	·1	6·1	12·3	16·1
118	Chandpur	49	143	2·1	..	..	1·6	1·2	·3	·3	2·9	8·5	10·0
Total of Towns ..		22,577	67,145	·9	·6	·0003	3·9	2·1	4·7	·4	6·4	19·1	21·4	
Total for the Bengal Presidency.		167,414	1,113,312	1·6	·2	·00002	14·7	·9	1·2	·4	3·3	22·3	22·7	

Supplementary Annual Form No. VI (A).—Deaths registered from DIFFERENT CAUSES in the districts and towns of the Bengal Presidency during the year 1931.

1 No.	2 Districts and towns.	3 Malaria.		4 Enteric fever.		5 Measles.		6 Relapsing fever.		7 Kala-azar.		8 Other fevers.		9 Dysentery.
		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.		
		Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.	Ratio.		
DISTRICTS (EXCLUDING TOWNS).														
Burdwan Division.														
1	Burdwan ..	11,468	7.9	93	.1	58	.04	9	.01	126	.1	12,725	8.7	412 .3
2	Birbhum ..	10,376	11.1	293	.3	60	.1	52	.05	17	.02	10,561	11.3	180 .2
3	Bankura ..	8,478	8.1	70	.1	42	.04	74	.1	35	.03	6,681	6.4	290 .3
4	Midnapur ..	19,429	7.1	472	.2	60	.02	..	..	117	.04	19,109	7.0	1,450 .5
5	Hooghly ..	7,757	8.5	945	1.0	21	.02	28	.03	68	.1	3,175	3.5	262 .3
6	Howrah ..	1,623	1.9	202	.2	24	.03	184	.2	109	.1	3,544	4.2	386 .4
Presidency Division.														
7	24-Parganas ..	6,189	2.8	282	.1	32	.01	77	.03	501	.2	15,075	6.9	643 .3
8	Nadia ..	31,126	21.8	86	.1	22	.01	186	.1	236	.2	5,885	4.1	300 .2
9	Murshidabad ..	19,858	15.4	98	.1	9	.01	40	.03	54	.04	8,101	6.3	172 .1
10	Jessore ..	30,616	18.5	245	.1	53	.03	74	.04	288	.2	5,971	3.6	301 .2
11	Khulna ..	12,013	7.5	622	.4	34	.02	121	.1	301	.2	6,805	4.3	510 .3
Rajshahi Division.														
12	Rajshahi ..	29,116	20.9	312	.2	121	.1	37	.03	310	.2	6,276	4.5	262 .2
13	Dinajpur ..	20,091	11.6	893	.5	449	.3	490	.3	1,002	.6	12,803	7.4	554 .3
14	Jalpaiguri ..	9,703	10.1	211	.2	56	.1	13	.01	194	.2	5,345	5.5	667 .7
15	Darjeeling ..	2,564	8.8	42	.1	21	.1	84	.3	81	.3	2,211	7.6	397 1.4
16	Rangpur ..	23,139	9.0	2,338	.9	210	.1	1,805	.7	610	.2	23,669	9.2	1,105 .4
17	Bogra ..	9,943	9.3	96	.1	102	.1	107	.1	213	.2	5,701	5.3	268 .2
18	Pabna ..	17,429	12.5	170	.1	53	.04	119	.1	189	.1	8,302	6.0	308 .2
19	Malda ..	23,903	23.5	129	.1	63	.1	25	.02	273	.3	2,124	2.1	53 .05
Dacca Division.														
20	Dacca ..	12,325	3.8	748	.2	275	.1	1	.0003	1,002	.3	27,417	8.4	3,313 1.0
21	Mymensingh ..	9,660	1.9	562	.1	446	.1	465	.1	805	.2	45,200	9.0	1,402 .3
22	Faridpur ..	19,571	8.5	433	.2	159	.1	473	.2	684	.3	17,441	7.5	1,782 .8
23	Bakarganj ..	303	.1	48	.02	15	.005	60	.02	93	.03	27,853	9.7	716 .2
Chittagong Division.														
24	Chittagong ..	3,212	1.8	509	.3	72	.04	218	.1	260	.1	26,049	15.0	473 .3
25	Noakhali ..	2,574	1.5	810	.5	160	.1	510	.3	582	.3	14,837	8.8	1,423 .8
26	Tippera ..	3,475	1.1	525	.2	92	.03	445	.1	1,353	.4	20,035	6.6	2,051 .7
Total of Districts ..		346,121	7.5	11,234	.2	2,709	.1	5,697	.1	9,503	.2	342,895	7.4	19,680 .4

1	2	10		11		12		13		14		15	16			17
No.	Districts and towns.	Diarrhœa.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.		Deaths from child-birth.*	Deaths under one year.			Infant mortality rate.
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.	
DISTRICTS (EXCLUDING TOWNS).																
Burdwan Division.																
1	Burdwan ..	771	.5	110	.1	1,084	.7	422	.3	398	.3	233	4,391	3,727	8,118	198.4
2	Birbhum ..	246	.3	174	.2	480	.5	241	.2	962	1.0	218	3,942	3,388	7,330	205.9
3	Bankura ..	968	.9	79	.1	965	.9	376	.3	459	.4	185	2,911	2,690	5,601	184.5
4	Midnapur ..	1,694	.6	167	.1	2,394	.9	778	.3	690	.2	535	6,648	6,097	12,745	166.7
5	Hooghly ..	1,982	1.1	86	.1	1,835	2.0	383	.4	398	.4	178	2,350	2,040	4,390	185.1
6	Howrah ..	1,665	2.0	72	.1	711	.8	485	.6	630	.7	134	1,791	1,506	3,297	148.8
Presidency Division.																
7	24-Parganas.	627	.3	209	.1	1,254	.6	434	.2	602	.3	333	4,696	3,833	8,529	140.5
8	Nadia ..	117	.1	53	.04	810	.6	261	.2	263	.2	267	5,302	4,879	10,181	207.9
9	Murshidabad ..	88	.1	87	.1	214	.2	113	.1	96	.1	198	4,506	3,885	8,391	168.6
10	Jessore ..	240	.1	40	.02	819	.5	240	.1	284	.2	421	3,875	3,705	7,580	187.5
11	Khulna ..	356	.2	59	.04	708	.4	278	.2	291	.2	452	4,664	3,968	8,632	184.5
Rajshahi Division.																
12	Rajshahi ..	201	.1	33	.02	214	.1	85	.1	139	.1	353	5,362	4,800	10,162	221.6
13	Dinajpur ..	683	.4	516	.3	1,658	.9	475	.3	500	.3	762	4,560	3,900	8,460	163.4
14	Jalpaiguri ..	702	.7	437	.4	1,642	1.7	641	.7	418	.4	658	2,668	2,454	5,122	157.4
15	Darjeeling ..	159	.5	169	.6	293	1.0	305	1.0	240	.8	33	719	575	1,294	121.1
16	Rangpur ..	566	.2	315	.1	1,214	.5	385	.1	1,304	.5	933	9,463	8,316	17,779	238.1
17	Bogra ..	246	.2	54	.05	218	.2	155	.1	167	.1	304	2,630	2,300	4,930	185.3
18	Pabna ..	225	.2	24	.02	342	.2	214	.1	229	.2	336	3,618	3,084	6,702	185.9
19	Malda ..	55	.05	55	.05	98	.1	60	.1	57	.1	118	2,841	2,551	5,392	175.3
Dacca Division.																
20	Dacca ..	1,614	.5	217	.1	671	.2	596	.2	1,032	.3	785	8,803	7,754	16,557	196.7
21	Mymensingh ..	693	.1	258	.05	405	.1	579	.1	638	.1	578	10,599	8,895	19,494	161.4
22	Faridpur ..	673	.3	222	.1	993	.4	346	.1	1,041	.4	511	6,621	5,484	12,105	179.1
23	Bakarganj ..	182	.1	17	.01	125	.04	126	.04	211	.1	218	6,204	5,116	11,320	142.7
Chittagong Division.																
24	Chittagong ..	384	.2	123	.1	547	.3	84	.04	121	.1	290	4,192	3,397	7,589	153.6
25	Noakhali ..	809	.5	351	.2	757	.4	195	.1	852	.5	707	4,160	3,606	7,766	130.3
26	Tippera ..	644	.2	216	.1	388	.1	255	.1	392	.1	363	4,695	3,741	8,436	121.0
Total of Districts		15,590	.3	4,143	.1	20,839	.4	8,512	.2	12,414	.3	10,103	122,211	105,691	227,902	173.3

* Deaths during or within 14 days of labour.

1 No.	2 Districts and towns.	3 Malaria.		4 Enteric fever.		5 Measles.		6 Relapsing fever.		7 Kala-azar.		8 Other fevers.		9 Dysentery.	
		Ratio.		Ratio.		Ratio.		Ratio.		Ratio.		Ratio.		Ratio.	
		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.	
TOWNS.															
Burdwan District.															
1	Burdwan ..	110	2.8	26	.6	1	.02	..	..	12	.3	2	.05	67	1.7
2	Kalna ..	13	1.3	..	..	..	..	..	..	6	.6	112	11.7	16	1.7
3	Katwa ..	1	.1	..	..	..	..	..	..	..	..	32	4.1	7	.9
4	Dainhat ..	38	7.8	1	.2	..	..	..	..	..	..	1	.2	1	.2
5	Raniganj ..	55	3.3	1	.1	..	..	..	..	..	..	31	1.9	12	.7
6	Asansol ..	..	..	..	..	1	.03	..	..	..	..	41	1.3	3	.1
7	Suri ..	65	6.0	..	..	..	..	..	..	..	..	53	4.9	3	.3
Bankura District.															
8	Bankura ..	8	.2	1	.03	..	..	..	..	1	.03	63	2.0	14	.4
9	Vishnupur ..	58	2.9	..	..	..	.3	..	..	..	..	75	3.8	14	.7
10	Sonamukhi ..	21	1.9	2	.2	3	..	..	..	..	..	48	4.4	7	.6
Midnapur District.															
11	Midnapur ..	2	.1	..	..	1	.03	..	..	..	..	60	1.9	31	1.0
12	Ghatal ..	14	1.1	..	..	..	..	..	..	..	..	89	7.2	7	.6
13	Kharar ..	11	1.9	3	.5	..	..	..	..	..	..	17	3.0	1	.2
14	Chandrakona ..	26	4.3	..	1.0	..	..	..	..	6	1.0	15	2.5	13	2.2
15	Ramjibanpur ..	24	3.8	6	..	..	..	..	..	..	..	1	.2	12	1.9
16	Khirpai ..	..	..	..	..	..	..	..	..	..	..	22	5.9	..	..
17	Tamluk ..	1	.1	..	..	..	..	..	..	1	.1	22	2.4	13	1.4
Hooghly District.															
18	Hooghly-Chinsura ..	18	.5	27	.8	2	.1	..	..	6	.2	152	4.6	21	.6
19	Bansberia ..	11	.8	2	.1	2	.1	..	..	1	.1	67	4.7	2	.1
20	Arambagh ..	56	7.5	..	..	..	..	..	..	..	..	..	..	1	.1
21	Serampur ..	8	.2	13	.3	6	.1	1	.02	2	.05	57	1.5	53	1.3
22	Rishra-Konnagar ..	4	.1	7	.3	3	.1	..	..	2	.1	32	1.2	10	.4
23	Uttarpara ..	4	.4	..	..	..	..	..	..	2	.2	14	1.5	11	1.2
24	Kotrung ..	3	.4	..	..	..	..	..	..	..	..	18	2.5	3	.4
25	Baidyabati ..	9	.5	2	.1	1	.05	..	..	..	..	51	2.7	15	.8
26	Bhadreswar ..	8	.3	..	..	1	.04	..	..	..	..	62	2.7	11	.5
27	Chandpani ..	4	.1	1	.04	..	..	..	..	..	..	32	1.3	11	.4

No.	Districts and towns.	10		11		12		13		14		15	16			17
		Diarrhoea.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.			Deaths under one year.			
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Male.	Female.	Total.	Deaths from child-birth.*	
TOWNS.																
Burdwan District.																
1	Burdwan ..	55	1.4	..	..	79	2.0	13	.3	40	1.0	20	11	10	21	39.8
2	Kalna ..	10	1.0	..	..	17	1.8	6	.6	5	.5	..	32	21	53	395.5
3	Katwa ..	1	.1	..	..	3	.4	6	.8	3	.4	..	5	2	7	89.7
4	Dainhat ..	..	..	..	..	10	2.1	1	.2	4	.8	..	9	3	12	193.5
5	Raniganj ..	8	.5	1	.1	25	1.5	16	1.0	27	1.6	7	34	26	60	178.5
6	Asansol ..	9	.3	..	..	9	.3	7	.2	3	.1	13	35	32	67	121.8
7	Suri ..	4	.4	3	.3	22	2.0	5	.4	8	.7	1	16	10	26	270.8
Bankura District.																
8	Bankura ..	33	1.0	2	.1	22	.7	1	.03	22	.7	6	31	27	58	127.7
9	Vishnupur ..	48	2.4	1	.05	28	1.4	6	.3	22	1.1	6	43	33	76	214.7
10	Sonamukhi ..	40	3.6	..	..	36	3.3	7	.6	17	1.5	5	35	50	85	280.5
Midnapur District.																
11	Midnapur ..	26	.8	1	.03	34	1.1	7	.2	9	.3	..	12	10	22	34.8
12	Ghatal ..	44	3.5	..	..	33	2.7	2	.2	17	1.4	6	25	18	43	123.5
13	Kharar ..	24	4.2	..	..	12	2.1	3	.5	11	1.9	3	4	5	9	104.6
14	Chandrakona ..	15	2.5	..	..	29	4.8	3	.5	15	2.5	8	13	14	27	204.5
15	Ramjibanpur ..	41	6.6	6	1.0	37	5.9	..	..	24	3.8	6	16	13	29	219.7
16	Kharpai ..	31	8.4	..	..	27	7.3	..	..	9	2.4	..	9	6	15	182.9
17	Tamluk ..	4	.4	..	..	1	.1	5	.5	4	.4	..	6	7	13	79.8
Hooghly District.																
18	Hooghly-Chinsura ..	32	1.0	..	..	63	1.9	15	.4	20	.6	23	85	61	146	156.3
19	Bansberia ..	5	.3	..	..	11	.8	3	.2	5	.3	1	19	9	28	250.0
20	Arambagh ..	16	2.1	..	..	23	3.1	4	.5	1	.1	3	14	12	26	161.5
21	Serampur ..	58	1.5	1	.02	33	.8	16	.4	30	.8	7	43	45	88	108.5
22	Rishra-Konnagar ..	19	.7	2	.1	10	.4	10	.4	21	.8	3	39	26	65	157.7
23	Uttarpara ..	5	.5	3	.3	9	1.0	6	.6	6	.6	..	3	6	9	46.6
24	Kotrung ..	5	.7	..	..	3	.4	5	.7	8	1.1	2	10	9	19	116.5
25	Baidyabati ..	23	1.2	..	..	8	.4	6	.3	11	.6	6	38	22	60	114.0
26	Bhadreswar ..	25	1.1	..	..	9	.4	7	.3	13	.6	2	35	30	65	175.6
27	Chandpur ..	16	.6	3	.1	17	.7	5	.2	9	.3	3	36	28	64	145.4

* Deaths during or within 14 days of labour.

1	2	3		4		5		6		7		8		9	
No.	Districts and towns.	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala-azar.		Other fevers.		Dysentery.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		
TOWNS.															
Howrah District.															
28	Howrah ..	32	.1	218	1.0	15	.1	..	..	14	.1	48	.2	730	3.2
29	Bally ..	10	.3	5	.2	..	..	..	..	2	.1	69	2.3	8	.3
24-Parganas District.															
30	South Suburban	112	2.8	40	1.0	6	.1	..	..	9	.2	31	.8	55	1.4
31	Tollyganj ..	10	.4	8	.3	1	.04	..	..	..	..	53	2.2	20	.8
32	Budge-Budge	5	.2	..	..	..	..	..	..	..	..	121	5.0	26	1.1
33	Baranagar ..	10	.3	23	.6	1	.03	..	..	3	.1	90	2.4	103	2.8
34	Kamarhati	12	.4	..	..	..	..	..	..	2	.1	91	3.0	46	1.5
35	Rajpur ..	6	.5	1	.1	..	..	..	..	1	.1	37	3.2	14	1.2
36	Baruipur ..	8	1.2	..	..	..	..	..	..	..	..	11	1.7	2	.3
37	Jaynagar ..	7	.7	1	.1	..	..	..	..	3	.3	33	3.4	12	1.2
38	North Dum-Dum	2	.4	1	.2	..	..	..	..	2	.4	18	4.0	5	1.1
39	South Dum-Dum	5	.3	8	.4	..	.1	..	..	1	.05	22	1.2	29	1.6
40	Khardah ..	3	.5	..	..	..	..	..	..	..	..	13	2.2	2	.3
41	Barrackpur ..	3	.1	2	.1	..	..	..	..	..	..	23	.9	6	.2
42	Panihati ..	13	1.1	..	..	..	..	..	..	3	.3	10	.8	16	1.4
43	North Barrackpur	11	.7	10	.6	..	..	..	..	1	.1	21	1.3	28	1.7
44	Titagarh ..	..	..	..	..	..	..	..	..	2	.04	511	10.3	5	.1
45	Garulia ..	6	.4	..	..	..	.03	..	..	..	..	33	2.3	1	.1
46	Naihati ..	4	.1	2	.1	..	..	..	..	..	..	29	.9	7	.2
47	Halisahar ..	15	.9	..	..	..	..	..	..	..	..	..	..	2	.1
48	Kanchrapara	..	..	..	..	..	.1	..	..	5	.3	80	5.3	4	.3
49	Bhatpara ..	24	.3	17	.2	11	.1	..	..	4	.04	405	4.8	34	.4
50	Barasat ..	57	6.6	..	..	..	..	..	..	..	..	2	.2	2	.2
51	Gobardanga	29	6.4	..	..	..	..	..	..	..	..	6	1.3	6	1.3
52	Basirhat ..	37	1.7	13	.6	1	.04	..	..	9	.4	59	2.8	21	1.0
53	Baduria ..	4	.3	..	..	..	..	..	..	6	.4	124	9.1	37	2.7
54	Taki ..	7	.8	..	..	..	..	..	..	..	..	45	5.5	6	.7
55	Dum-Dum ..	..	..	..	..	..	..	..	..	..	..	8	1.5	..	..
56	Calcutta ..	773	.6	759	.6	147	.1	..	..	296	.2	1,515	1.3	1,600	1.3
City of Calcutta.															
Nadia District.															
57	Krishnagar	4	.2	..	..	..	..	..	..	3	.1	101	4.2	7	.3
58	Nabadwip ..	5	.3	4	.2	..	..	..	..	..	..	49	2.6	25	1.3

1 No.	2 Districts and towns.	10		11		12		13		14		15 Deaths from child-birth.*	16			17 Infant mortality rate.
		Diarrhœa.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.			Deaths under one year.			
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.	
28	Howrah ..	303	1.3	..	..03	875	3.9	294	1.3	887	3.9	45	773	672	1,445	261.5
29	Bally ..	15	.5	1	..03	32	1.0	7	.2	21	.7	..	23	21	44	82.4
24-Parganas District.																
30	South Suburban ..	88	2.2	1	.02	56	1.4	23	.6	41	1.0	18	113	96	209	202.5
31	Tollyganj ..	9	.4	..	..	39	1.6	6	.2	13	.5	..	19	15	34	61.8
32	Budge-Budge ..	52	2.1	..	..	5	.2	2	.1	23	.9	..	5	4	9	35.6
33	Baranagar ..	39	1.0	7	..2	54	1.4	35	.9	41	1.1	5	88	76	164	163.1
34	Kamarhati ..	26	.8	..	..3	24	.8	15	.5	23	.8	1	23	11	34	72.2
35	Rajpur ..	8	.7	3	..3	27	2.4	4	.3	4	.3	4	12	7	19	66.9
36	Baruipur ..	1	.1	..	..1	6	.9	1	.1	2	.3	..	6	6	12	144.5
37	Jaynagar ..	13	1.3	1	..1	4	.4	9	.9	18	1.8	1	15	8	23	230.0
38	North Dum-Dum ..	16	3.5	..	..	5	1.1	1	.2	4	.9	1	10	10	20	185.2
39	South Dum-Dum ..	2	.1	..	..3	18	1.0	7	.4	19	1.0	3	34	22	56	135.6
40	Khardah ..	5	.8	2	..3	7	1.2	..	..	1	.2	1	8	4	12	105.2
41	Barrackpur ..	6	.2	3	..1	14	.5	7	.3	12	.5	2	10	12	22	108.9
42	Panihati ..	11	.9	..	..	32	2.7	11	.9	3	.3	1	18	29	47	128.4
43	North Barrackpur ..	3	.2	..	..	22	1.3	7	.4	10	.6	5	33	25	58	132.1
44	Titagarh ..	28	.6	..	..	7	.1	4	.1	2	.04	7	54	43	97	124.3
45	Garulia ..	6	.4	..	..	..	..	1	.1	3	.2	..	13	5	18	109.1
46	Naihati ..	6	.2	..	..	22	.7	9	.3	9	.2	..	12	14	26	72.2
47	Halisahar ..	7	.4	..	..	17	1.0	..	..4	4	.2	5	9	12	21	138.1
48	Kanchrapara ..	8	.5	2	..1	14	.9	6	.4	2	.1	6	7	11	18	72.9
49	Bhatpara ..	45	.5	2	..02	74	.9	13	.1	25	.3	6	111	52	163	122.0
50	Barasat ..	1	.1	..	..	4	.5	2	.2	1	.1	1	7	4	11	103.7
51	Gobardanga ..	..	..	1	..2	12	2.6	3	.7	1	.2	3	..	..	4	95.2
52	Basirhat ..	20	.9	..	..	65	3.0	19	.9	1	.04	11	67	52	119	169.5
53	Baduria ..	12	.9	..	..	20	1.5	..	..	5	.4	..	27	21	48	156.3
54	Taki ..	5	.6	..	..	6	.7	3	.4	3	.4	..	18	15	33	204.9
55	Dum-Dum ..	..	..	..	..	..	..	3	.6	1	.2	..	3	3	6	240.0
City of Calcutta.																
56	Calcutta ..	1,358	1.1	492	.4	3,585	3.0	2,662	2.2	3,026	2.5	82	3,556	2,911	6,467	244.2
Nadia District.																
57	Krishnagar ..	1	.04	..	..	9	.4	3	.1	30	1.2	..	18	14	32	48.0
58	Nabadwip ..	10	.5	..	..	11	.6	9	.5	7	.4	5	34	24	58	142.5

* Deaths during or within 14 days of labour.

1	2	3		4		5		6		7		8		9
No.	Districts and towns.	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala-azar.		Other fevers.		Dysentery.
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	
TOWNS.														
Nadia District.														
59	Ranaghat ..	54	4.7	..	..	..	..	..	..	..	..	..	8	.7
60	Birnagar ..	25	10.7	..	..	..	..	..	..	..	..	..	..	1.4
61	Santipur ..	106	4.2	4	.2	..	..	..	..	1	.04	71	.8	.2
62	Chakdaha ..	49	12.3	..	..	..	..	..	..	..	..	..	..	.9
63	Kushtia ..	11	1.2	1	.1	..	..	..	..	1	.1	20	.1	.9
64	Kumarkhali ..	44	13.1	..	..	..	..	..	..	..	..	..	3	.3
65	Meherpur ..	19	3.1	..	..	..	..	..	..	4	.6	18	.9	.3
Murshidabad District.														
66	Berhampur ..	82	3.0	29	1.1	..	..	..	..	16	.6	155	5.6	1.5
67	Murshidabad ..	4	.4	2	.2	..	..	..	..	..	..	125	13.2	.7
68	Jiaganj-Azimganj ..	27	2.4	3	.3	..	..	..	..	2	.2	26	2.4	1.1
69	Kandi ..	1	.1	..	..	..	..	..	..	1	.1	56	4.4	.6
70	Jangipur ..	..	..	..	..	..	..	..	..	1	.1	119	9.3	.5
71	Dhulian ..	119	12.2	..	..	..	..	..	..	..	..	..	2	.2
Jessore District.														
72	Jessore ..	30	2.6	5	.4	..	..	..	..	6	.5	3	.3	.3
73	Kotchandpur ..	81	13.2	..	..	..	..	..	..	..	..	2	.3	.2
74	Maheshpur ..	31	9.3	5	1.5	..	..	..	..	2	.6	4	1.2	1.5
Khulna District.														
75	Khulna ..	17	.9	1	.05	..	..	..	..	3	.1	94	4.9	.9
76	Satkhira ..	17	1.5	..	..	..	..	..	..	9	.8	62	5.5	.7
77	Debhatta ..	..	..	..	..	..	..	..	..	..	..	30	6.0	.2
Rajshahi District.														
78	Rajshahi ..	15	.5	13	.5	..	..	..	..	9	.3	66	2.4	.8
79	Nator ..	22	2.6	..	..	..	..	..	..	3	.4	29	3.5	.2
Dinajpur District.														
80	Dinajpur ..	12	.6	..	..	..	..	..	..	3	.1	71	3.7	1.6
Jalpaiguri District.														
81	Jalpaiguri ..	35	1.8	..	..	..	..	..	..	12	.6	14	.7	1.4

1 No.	2 Districts and towns.	10		11		12		13		14		15	16		17
		Diarrhoea.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.		Deaths from child-birth.*	Deaths under one year.		Infant mortality rate.
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.
TOWNS.															
Nadia District.															
59	Ranaghat ..	..	..	..	..	22	1.9	2	.2	..	..	1	7	10	17
60	Birnagar ..	..	..	..	..	5	2.1	2	.8	..	..	2	5	6	11
61	Santipur ..	26	1.0	..	..	50	2.0	25	1.0	27	1.1	14	47	34	81
62	Chakdaha ..	1	.2	..	..	..	..	..	..	..	..	..	4	8	12
63	Kushtia ..	8	.8	1	.1	7	.7	3	.3	4	.4	4	3	7	10
64	Kumarkhali ..	8	2.4	..	..	8	2.4	2	.6	7	2.1	..	10	6	16
65	Meherpur ..	3	.5	..	..	15	2.4	4	.6	..	..	2	9	2	11
Murshidabad District.															
66	Berhampur ..	2	.1	..	..	33	1.2	21	.8	12	.4	4	46	48	94
67	Murshidabad ..	6	.6	..	..	10	1.0	1	.1	1	.1	..	13	15	28
68	Jaganj-Azimganj ..	5	.4	..	..	7	.6	8	.7	9	.8	5	12	8	20
69	Kandi ..	2	.2	..	..	4	.3	3	.2	16	1.3	..	21	19	40
70	Jangipur ..	..	..	..	..	8	.6	..	..	..	..	..	6	7	13
71	Dhulian ..	..	..	..	..	1	.1	4	.4	1	.1	..	10	14	24
Jessore District.															
72	Jessore ..	1	.1	..	..	19	1.7	2	.2	6	.5	..	2	1	3
73	Kotechandpur ..	3	.5	..	..	3	.5	1	.2	1	.2	..	6	2	8
74	Maheshpur ..	3	.9	..	..	8	2.4	..	..	5	1.5	..	5	6	11
Khulna District.															
75	Khulna ..	6	.3	..	..	13	.7	..	..	2	.1	..	10	10	20
76	Satkhira ..	6	.5	..	..	33	2.9	2	.2	..	..	13	25	22	47
77	Debbhatta ..	3	.6	..	..	..	..	..	..	12	2.4	..	8	4	12
Rajshahi District.															
78	Rajshahi ..	15	.5	1	.04	27	1.0	9	.3	8	.3	6	24	31	55
79	Nator ..	6	.7	..	..	6	.7	1	.1	10	1.2	7	13	17	30
Dinajpur District.															
80	Dinajpur ..	4	.2	1	.05	41	2.1	2	.1	16	.8	..	15	18	33
Jalpaiguri District.															
81	Jalpaiguri ..	6	.3	..	..	32	1.7	27	1.4	14	.7	13	9	8	17

* Deaths during or within 14 days of labour.

1 No.	2 Districts and towns.	3 Malaria.		4 Enteric fever.		5 Measles.		6 Relapsing fever.		7 Kala-azar.		8 Other fevers.		9 Dysentery.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
TOWNS.															
Darjeeling District.															
82	Darjeeling ..	42	2.1	6	.3	3	.1	..	..	14	.7	147	6.9	14	.7
83	Kurseong ..	16	2.1	..	..	..	..	..	..	3	.4	112	15.0	5	.7
Rangpur District.															
84	Rangpur ..	19	.9	13	.6	..	..	..	..	4	.2	26	1.2	24	1.1
85	Gaibandha ..	..	..	..	..	..	..	..	..	1	.1	21	2.5	4	.5
Bogra District.															
86	Bogra ..	4	.3	6	.4	..	..	..	..	1	.1	22	1.5	6	.4
87	Sherpur ..	29	6.8	..	..	..	..	..	..	1	.2	9	2.1	3	.7
Pabna District.															
88	Pabna ..	..	..	..	..	..	..	..	..	..	..	51	2.3	3	.1
89	Serajganj ..	21	.6	3	.1	..	..	6	.2	8	.2	184	5.7	31	.9
Malda District.															
90	English Bazar	69	4.1	3	.2	..	..	..	..	7	.4	25	1.5	29	1.7
91	Old Malda ..	14	5.0	..	..	..	..	..	..	2	.7	22	7.9	2	.7
92	Nawabganj	10	.6	..	..	..	..	..	..	14	.9	124	7.8	45	2.8
Dacca District.															
93	Dacca ..	19	.1	55	.4	25	.2	..	..	112	.8	196	1.4	329	2.4
94	Narayanganj	1	.03	..	..	1	.03	..	..	2	.1	210	6.1	72	2.1
Mymensingh District.															
95	Mymensingh	1	.03	5	.2	..	..	..	..	1	.03	176	5.8	22	.7
96	Muktagacha	..	..	..	..	..	..	..	..	..	..	13	2.1	1	.2
97	Netrokona ..	..	..	..	..	..	..	..	..	..	..	48	4.4	12	1.1
98	Jamalpur ..	32	1.4	6	.3	..	..	..	..	11	.5	90	3.9	8	.3
99	Sherpur ..	39	2.0	2	.1	..	..	..	..	3	.1	83	4.2	9	.

1 No.	2 Districts and towns.	10		11		12		13		14		15 Deaths from child-birth.*	16			17 Infant mor-tality rate.
		Diarrhoea.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.			Deaths under one year.			
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Male.	Female.	Total.
TOWNS.																
Darjeeling District.																
82	Darjeeling ..	10	.5	4	.2	47	2.2	54	2.5	12	.6	5	70	37	107	132.1
83	Kurseong ..	..	..	..	..	11	1.5	11	1.5	4	.5	..	23	11	34	132.3
Rangpur District.																
84	Rangpur ..	7	.3	1	.04	10	.5	7	.3	1	.04	5	13	7	20	87.0
85	Gaibandha ..	1	.1	1	.1	6	.7	..	..	4	.5	1	6	3	9	46.1
Bogra District.																
86	Bogra ..	7	.5	..	..	4	.3	3	.2	..	..	1	9	7	16	172.0
87	Sherpur ..	4	.9	..	..	10	2.3	4	.9	2	.5	2	1	..	1	16.9
Pabna District.																
88	Pabna ..	8	.4	4	.2	2	.1	1	.04	3	.1	..	1	5	6	42.2
89	Seraiganj ..	19	.6	..	..	14	.4	2	.1	13	.4	5	40	24	64	114.5
Malda District.																
90	English Bazar ..	10	.6	2	.1	20	1.2	1	.1	10	.6	6	24	19	43	128.3
91	Old Malda ..	2	.7	..	..	10	3.6	1	.4	1	.4	1	..	4	4	108.1
92	Nawabganj ..	18	1.1	..	..	16	1.0	4	.2	6	.4	1	37	30	67	137.6
Dacca District.																
93	Dacca ..	119	.9	5	.04	380	2.7	108	.8	456	3.3	47	528	408	936	214.8
94	Narayanganj ..	14	.4	..	..	15	.4	10	.3	5	.1	21	136	111	247	228.3
Mymensingh District.																
95	Mymensingh ..	11	.4	1	.03	13	.4	11	.4	17	5	1	55	33	88	157.4
96	Muktagacha ..	..	..	..	..	2	.3	1	.2	..	..	..	4	3	7	52.6
97	Netrokona ..	4	.4	..	..	2	.2	1	.1	..	..	..	16	15	31	113.1
98	Jamalpur ..	9	.4	1	.04	18	.8	3	.1	14	.6	14	43	35	78	134.0
99	Sherpur ..	16	.8	..	..	4	.2	5	.2	13	.7	..	38	28	66	112.0

*Deaths during or within 14 days of labour.

1	2	3		4		5		6		7		8		9	
No.	Districts and towns.	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala-azar.		Other fevers.		Dysentery.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
TOWNS.															
Mymensingh District.															
100	Kishorganj	..	..9	..	..	..	.1	..	..	..	..	50	3.2	5	.3
101	Bajitpur	..	..	..	..	..	..	..	..	..	..	18	1.5	3	.3
102	Tangail	3	.2	..	..	..	..	..	..	5	.3	80	5.0	14	.9
103	Gauripur	1	.2	..	..	..	..	1	.2	..	..	8	1.3	2	.3
Faridpur District.															
104	Faridpur	..	..	1	.1	..	..	..	..	2	.1	15	1.0	3	.2
105	Madaripur	5	.2	2	.1	..	.04	..	..	2	.1	46	1.7	22	.8
106	Rajbari	1	.1	1	.1	..	..	..	..	4	.6	91	12.8	7	1.0
Bakarganj District.															
107	Barisal	..	..	1	.02	..	..	..	..	3	.1	193	5.4	50	1.4
108	Jhalakati	..	..	..	..	..	..	..	..	..	..	7	1.1	2	.3
109	Nalchiti	..	..	..	..	..	..	..	..	..	..	5	2.6	3	1.5
110	Pirojpur	..	..	1	.1	..	.3	..	..	3	.3	43	3.9	6	.5
111	Patuakhali	..	..	..	..	..	..	..	..	1	.1	16	2.5	2	.3
112	Bhola	..	..	..	..	..	..	..	..	..	..	6	1.1	1	.2
Chittagong District.															
113	Chittagong	3	.1	1	.02	1	.02	..	..	1	.02	133	2.5	58	1.1
114	Cox's Bazar	..	..	..	..	1	.2	..	..	..	..	42	8.4	1	.2
Noakhali District.															
115	Noakhali	..	..	1	.1	..	..	..	..	2	.1	39	3.0	15	1.1
Tippera District.															
116	Comilla	1	.03	..	..	1	.03	..	..	5	.2	35	1.1	15	.5
117	Brahmanbaria	..	..	..	..	..	..	..	..	3	.1	116	4.3	24	.9
118	Chandpur	5	.3	..	..	1	.1	..	..	3	.2	18	1.1	15	.9
Total of Towns		2,990	.8	1,374	.4	245	.1	8	.002	696	.2	8,312	2.4	4,334	1.2
Total for the Bengal Presidency.		349,111	7.0	12,608	.2	2,954	.1	5,705	.1	10,199	.2	351,207	7.0	24,014	.5

1	2	10		11		12		13		14		15	16			17
No.	Districts and towns.	Diarrhœa.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.		Deaths from child-birth.*	Deaths under one year.			Infant mortality rate.
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.	
TOWNS.																
Mymensingh District.																
100	Kishorganj ..	23	1.5	2	.1	2	.1	29	1.9	1	13	9	22	97.8		
101	Rajitpur ..	2	.2	..	..	..	1.1	2	.2	7	5	7	12	92.3
102	Tangail ..	6	.4	..	..	18	..	2	.1	..	26	18	44	176.7
103	Gauripur ..	1	.2	..	..	..	..	3	.5	..	1	..	1	19.6
Faridpur District.																
104	Faridpur ..	3	.2	1	.1	8	.5	5	.3	7	27	13	40	155.0		
105	Madaripur ..	2	.1	..	..	7	.3	1	.04	4	17	22	39	81.4
106	Rajbari ..	8	1.1	..	..	7	1.0	5	.7	1	12	7	19	121.0
Bakarganj District.																
107	Barisal ..	7	.2	..	..	20	.6	7	.2	9	78	49	127	254.0
108	Jhalakati ..	3	.5	..	..	2	.3	1	.1	..	6	4	10	84.7
109	Nalchiti ..	..	..	..	..	3	1.5	..	1.0	2	2	2	4	125.0
110	Pirojpur ..	2	.2	..	..	3	.3	2	.2	1	23	28	51	155.0
111	Patuakhali ..	1	.1	..	..	2	.3	2	.3	..	1	5	6	54.5
112	Bhola ..	1	.2	..	..	2	.4	1	.2	..	1	5	6	41.4
Chittagong District.																
113	Chittagong ..	..	..	8	.1	59	1.1	11	.2	1	88	71	159	171.5
114	Cox's Bazar ..	..	..	..	..	2	.4	1	.2	..	7	4	11	189.6
Noakhali District.																
115	Noakhali ..	7	.5	..	..	2	.1	1	.1	2	11	5	16	58.2
Tippera District.																
116	Comilla ..	4	.1	..	..	4	.1	3	.1	1	11	10	21	84.0
117	Brahmanbaria ..	11	.4	..	..	3	.1	1	.04	4	49	39	88	109.2
118	Chandpur ..	5	.3	..	..	4	.2	1	.1	..	9	6	15	93.2
Total of Towns		3,160	.9	571	.2	6,760	1.9	3,726	1.1	5,386	1.5	584	7,529	6,121	13,650	187.0
Total for the Bengal Presidency.		12,750	.4	4,714	.1	27,599	.5	12,238	.2	17,800	.3	10,687	129,740	111,812	241,552	174.0

* Deaths during or within 14 days of labour.

Annual Form No. VII.—Deaths registered from CHOLERA in the districts of the Bengal Presidency during each month of the year 1931.

No.	Districts.	3 Circles of Registration.		4 Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number from which deaths from cholera were reported.		Number from which deaths from cholera were reported.									
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.								
Burdwan Division.													
1	Burdwan ..	29	28	2,637	399	13	74	295	215	84	15	24	108
2	Birbhum ..	15	15	2,403	80	..	5	29	37	23	15	12	40
3	Bankura ..	22	22	3,479	231	10	52	163	86	27	28	60	77
4	Midnapur ..	39	34	10,590	957	425	516	478	309	130	49	183	114
5	Hooghly ..	28	28	2,190	359	14	81	264	292	73	44	53	39
6	Howrah ..	13	13	1,113	190	60	98	198	154	130	97	126	42
Presidency Division.													
7	24-Parganas ..	63	59	3,292	938	364	674	832	454	204	108	160	95
8	Calcutta ..	1	1	1	1	67	95	265	203	153	181	112	27
9	Nadia ..	30	28	2,410	207	34	56	107	270	133	26	9	4
10	Murshidabad ..	26	26	1,835	208	51	36	98	118	21	19	29	50
11	Jessore ..	26	25	3,596	836	300	95	320	672	291	84	41	5
12	Khulna ..	25	25	2,152	653	279	126	171	157	134	83	39	54
Rajshahi Division.													
13	Rajshahi ..	26	26	4,617	428	218	146	111	75	49	22	5	13
14	Dinajpur ..	31	18	6,578	76	6	16	2	3	15	6	9	..
15	Jalpaiguri ..	18	14	769	11	3	1	..	2	4	3	1	2
16	Darjeeling ..	6	1	533	1	..	1	..	2	..	..	..	..
17	Rangpur ..	32	25	4,074	433	152	64	26	72	20	19	..	59
18	Bogra ..	14	14	2,197	400	120	59	21	20	45	24	3	145
19	Pabna ..	19	19	2,448	1,008	282	148	417	1,100	556	114	30	8
20	Malda ..	18	17	2,326	12	2	2	10	1	10	2	13	54
Dacca Division.													
21	Dacca ..	14	14	5,252	2,328	1,051	488	911	1,806	837	280	132	76
22	Mymensingh ..	60	58	8,326	1,516	1,639	805	778	807	479	257	85	91
23	Faridpur ..	17	17	3,634	1,048	427	336	899	1,333	411	94	37	15
24	Bakarganj ..	22	20	2,974	680	654	417	544	565	286	168	79	36
Chittagong Division.													
25	Chittagong ..	22	20	1,055	282	19	39	203	482	510	653	400	272
26	Noakhali ..	15	15	1,699	309	144	103	100	99	89	74	59	30
27	Tippura ..	23	23	4,180	1,361	525	392	482	491	457	319	167	58
Total for the Bengal Presidency.						6,859	4,925	7,724	9,825	5,171	2,784	1,868	1,514

No.	Districts.	5				6			7			Mean ratio per 1,000 during previous five years.
		September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			
						Male.	Female.	Total.	Male.	Female.	Total.	
	Burdwan Division.											
1	Burdwan ..	58	10	3	64	506	457	963	.6	.6	.6	1.2
2	Birbhum ..	4	2	41	160	196	172	368	.4	.4	.4	.9
3	Bankura ..	15	15	3	20	276	280	556	.5	.5	.5	.6
4	Midnapur ..	61	92	212	495	1,498	1,566	3,064	1.0	1.1	1.1	1.4
5	Hooghly ..	30	28	25	134	576	501	1,077	1.0	1.0	1.0	1.2
6	Howrah ..	34	34	41	77	579	512	1,091	1.0	1.0	1.0	2.8
	Presidency Division.											
7	24-Parganas ..	53	64	310	1,041	2,284	2,075	4,359	1.6	1.7	1.6	3.1
8	Calcutta ..	21	27	46	38	784	451	1,235	1.0	1.2	1.0	1.8
9	Nadia ..	6	11	23	80	414	345	759	.5	.5	.5	2.3
10	Murshidabad ..	29	39	403	308	620	581	1,201	.9	.8	.9	1.9
11	Jessore ..	14	25	132	808	1,483	1,304	2,787	1.7	1.6	1.7	2.6
12	Khulna ..	114	299	846	1,213	1,930	1,585	3,515	2.3	2.0	2.2	2.6
	Rajshahi Division.											
13	Rajshahi ..	19	16	112	231	533	484	1,017	.7	.7	.7	2.2
14	Dinajpur ..	1	28	5	52	83	60	143	.1	.1	.1	.7
15	Jalpaiguri ..	1	3	10	14	30	14	44	.05	.03	.04	.2
16	Darjeeling ..	..	..	..	..	1	2	3	.01	.01	.01	.1
17	Rangpur ..	257	411	1,027	456	1,205	1,358	2,563	.9	1.1	1.0	1.1
18	Bogra ..	1,013	706	466	114	1,279	1,457	2,736	2.3	2.7	2.5	1.0
19	Pabna ..	505	1,702	1,406	667	3,444	3,491	6,935	4.6	4.9	4.8	2.1
20	Malda ..	25	54	96	182	258	193	451	.5	.4	.4	2.2
	Dacca Division.											
21	Dacca ..	381	1,328	2,639	2,164	6,241	5,852	12,093	3.6	3.5	3.5	2.2
22	Mymensingh ..	113	1,014	2,872	1,430	5,120	5,241	10,370	1.9	2.1	2.0	1.8
23	Faridpur ..	76	390	2,107	2,132	4,127	4,130	8,257	3.4	3.6	3.5	3.0
24	Bakarganj ..	13	6	56	529	1,941	1,412	3,353	1.3	1.0	1.1	1.7
	Chittagong Division.											
25	Chittagong ..	137	101	37	12	1,427	1,438	2,865	1.6	1.5	1.6	1.0
26	Noakhali ..	18	10	120	1,306	1,020	1,132	2,152	1.2	1.3	1.3	1.9
27	Tippera ..	247	251	725	1,002	2,634	2,482	5,116	1.6	1.6	1.6	1.7
	Total for the Bengal Presidency.	3,245	6,666	13,763	14,729	40,498	38,575	79,073	1.6	1.6	1.6	1.8

Annual Form No. VIII.—Deaths registered from SMALL-POX in the districts of the Bengal Presidency during each month of the year 1931.

1 No.	2 Districts.	3 Circles of Registration.		4 Villages.		January	February.	March.	April.	May.	June.	July.	August.
		Number from which deaths from small-pox were reported.		Number in each district.	Number from which deaths from small-pox were reported.								
		Number in each district.	Number from which deaths from small-pox were reported.										
Burdwan Division.													
1	Burdwan ..	29	21	2,637	162	33	50	57	72	63	39	27	14
2	Birbhum ..	15	15	2,403	56	..	11	34	41	41	27	16	4
3	Bankura ..	22	20	3,479	154	74	116	69	60	48	34	26	17
4	Midnapur ..	39	28	10,590	75	14	51	32	49	48	14	11	5
5	Hooghly ..	28	26	2,190	136	68	83	95	88	56	29	19	22
6	Howrah ..	13	13	1,113	90	147	219	244	159	74	42	26	30
Presidency Division.													
7	24-Parganas ..	63	40	3,292	196	30	52	63	65	60	30	11	14
8	Calcutta ..	1	1	1	1	94	166	219	246	88	44	16	11
9	Nadia ..	30	18	2,410	30	4	13	17	13	13	6	1	2
10	Murshidabad ..	26	9	1,835	42	14	24	11	16	19	15	15	21
11	Jessore ..	26	9	3,596	17	11	17	21	5	5	..	4	..
12	Khulna ..	25	10	2,152	18	4	4	3	5	2	3	1	..
Rajshahi Division.													
13	Rajshahi ..	26	7	4,617	6	..	..	2	1	1	5	2	..
14	Dinajpur ..	31	11	6,578	75	24	12	22	40	31	18	23	8
15	Jalpaiguri ..	18	4	769	10	..	..	12	4	13	5	1	..
16	Darjeeling ..	6	2	533	2	1	..	1	..	5	1	2	..
17	Rangpur ..	32	25	4,074	138	19	92	120	128	176	111	64	60
18	Bogra ..	14	4	2,197	24	8	3	1	10	6	15	14	..
19	Pabna ..	19	10	2,448	14	..	5	17	11	4	2	1	..
20	Malda ..	18	8	2,326	6	7	2	11	..	1	12	..	4
Dacca Division.													
21	Dacca ..	14	13	5,252	387	84	106	168	183	207	199	164	57
22	Mymensingh ..	60	37	8,326	310	23	51	98	117	94	147	87	89
23	Faridpur ..	17	11	3,634	112	72	23	70	42	30	23	12	..
24	Bakarganj ..	22	10	2,974	12	4	3	9	4	3	4	6	2
Chittagong Division.													
25	Chittagong ..	22	11	1,055	39	39	30	101	95	45	37	23	12
26	Noakhali ..	15	8	1,699	21	13	13	7	11	21	9	10	2
27	Tippura ..	23	14	4,180	199	26	23	94	100	233	82	48	19
Total for the Bengal Presidency.						813	1,169	1,598	1,565	1,387	953	630	393

1	2	5				6			7		8			9
No.	Districts.	Septem-ber.	October.	Novem-ber.	Decem-ber.	Total.			Number of those deaths among children.		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 during previous five years.
						Male.	Female.	Total.	Under one year.	One year and under ten years.	Male.	Female.	Total.	
	Burdwan Division.													
1	Burdwan ..	11	6	3	3	182	196	378	5	1	.2	.3	.2	.6
2	Birbhum ..	9	..	1	6	85	105	190	15	46	.2	.2	.2	.6
3	Bankura ..	6	2	..	2	232	222	454	1	3	.4	.4	.4	.2
4	Midnapur ..	1	2	..	5	117	115	232	2	18	.1	.1	.1	.8
5	Hooghly ..	10	4	..	10	261	228	489	13	17	.4	.4	.4	.6
6	Howrah ..	22	5	7	27	512	490	1,002	..	..	.8	1.0	.9	.9
	Presidency Division.													
7	24-Parganas ..	6	..	1	10	187	155	342	..	..	.1	.1	.1	.5
8	Caleutta ..	4	1	..	2	495	396	891	27	61	.6	1.0	.7	1.1
9	Nadia ..	..	1	1	..	37	34	71	..	..	.04	.04	.04	.3
10	Murshidabad ..	8	2	4	1	69	81	150	1	22	.1	.1	.1	1.4
11	Jessore ..	..	..	..	..	36	27	63	1	2	.04	.03	.04	.2
12	Khulna ..	..	..	..	..	11	11	22	..	..	.01	.01	.01	.0
	Rajshahi Division.													
13	Rajshahi ..	1	..	..	..	5	7	12	..	..	.01	.01	.01	.2
14	Dinajpur ..	3	..	..	3	93	91	184	1	3	.1	.1	.1	.5
15	Jalpalguri ..	..	..	..	..	21	14	35	..	6	.04	.03	.03	.1
16	Darjeeling ..	..	..	..	..	7	3	10	..	1	.04	.02	.03	.1
17	Rangpur ..	14	11	30	19	430	414	844	..	..	.3	.3	.3	.6
18	Bogra ..	5	..	..	..	34	28	62	..	..	.1	.05	.1	1.1
19	Pabna ..	1	..	..	..	21	20	41	..	..	.03	.03	.03	1.2
20	Malda ..	2	..	1	6	23	23	46	..	..	.04	.04	.04	.9
	Dacca Division.													
21	Dacca ..	56	30	28	27	655	654	1,309	168	550	.4	.4	.4	1.0
22	Mymensingh ..	50	31	52	52	452	439	891	66	223	.2	.2	.2	.4
23	Faridpur ..	..	2	..	2	132	144	276	24	82	.1	.1	.1	.7
24	Bakarganj ..	5	..	..	3	27	16	43	..	..	.02	.01	.01	.1
	Chittagong Division.													
25	Chittagong ..	16	1	5	25	193	236	429	14	148	.2	.2	.2	.8
26	Noakhali ..	..	..	..	..	46	40	86	..	..	.05	.04	.05	.2
27	Tippera ..	27	..	1	2	335	320	655	44	42	.2	.2	.2	.4
	Total for the Bengal Presidency.	257	98	139	205	4,693	4,509	9,207	382	1,225	.2	.2	.2	.6

Annual Form No. IX.—Deaths registered from **FEVERS** in the districts of the Bengal Presidency during each month of the year 1931.

1 No.	2 Districts.	3 Circles of Registration.		4 Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number from which deaths were reported.		Number from which deaths were reported.									
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.								
Burdwan Division.													
1	Burdwan ..	29	29	2,637	1,827	2,022	2,067	2,160	1,905	1,515	1,597	1,507	1,943
2	Birbhum ..	15	15	2,403	2,076	1,585	1,393	1,456	1,693	1,114	1,156	1,354	1,806
3	Bankura ..	22	22	3,479	3,069	1,319	1,473	1,255	1,288	1,186	885	1,101	1,438
4	Midnapur ..	39	39	10,590	9,923	2,960	3,430	3,163	2,820	2,465	2,340	2,751	3,257
5	Hooghly ..	28	28	2,190	2,013	1,027	1,023	1,088	917	779	704	728	1,062
6	Howrah ..	13	13	1,113	493	546	442	671	431	413	369	377	501
Presidency Division.													
7	24-Parganas ..	63	63	3,292	3,028	2,235	1,665	2,012	1,662	1,440	1,685	1,701	2,020
8	Calcutta ..	1	1	1	1	255	246	291	373	273	360	284	311
9	Nadia ..	30	30	2,410	2,315	3,828	3,292	2,823	3,099	2,483	1,930	1,773	2,620
10	Murshidabad ..	26	26	1,835	1,532	2,742	2,128	2,072	2,277	1,736	1,619	1,829	2,415
11	Jessore ..	26	26	3,596	3,407	4,263	2,565	2,956	2,887	2,215	1,911	1,972	2,034
12	Khulna ..	25	25	2,152	1,939	1,481	1,186	1,344	1,132	998	1,152	1,251	1,545
Rajshahi Division.													
13	Rajshahi ..	26	26	4,617	4,351	3,280	2,614	2,756	3,041	2,510	2,095	2,235	3,244
14	Dinajpur ..	31	31	6,578	4,127	3,546	2,604	2,677	2,796	2,496	2,435	2,701	2,893
15	Jalpaiguri ..	18	18	769	646	1,148	902	1,122	843	1,117	1,573	1,175	1,478
16	Darjeeling ..	6	6	533	520	297	349	329	371	466	480	551	569
17	Rangpur ..	32	32	4,074	3,379	4,993	4,016	4,202	4,039	4,302	4,333	3,935	4,692
18	Bogra ..	14	14	2,197	2,150	1,309	1,098	941	1,139	769	1,053	1,161	1,758
19	Pabna ..	19	19	2,448	2,348	2,933	2,083	2,018	2,067	2,429	1,679	1,520	1,500
20	Malda ..	18	18	2,326	470	3,117	2,132	2,344	1,578	1,752	3,181	1,394	2,137
Dacca Division.													
21	Dacca ..	14	14	5,252	4,353	3,914	2,746	2,731	2,862	2,477	2,184	2,200	2,700
22	Mymensingh ..	60	60	8,326	8,216	5,202	4,233	4,420	3,787	3,749	4,176	3,786	4,408
23	Faridpur ..	17	17	3,634	2,715	3,978	2,672	3,024	3,211	2,437	2,092	2,239	2,862
24	Bakarganj ..	22	22	2,974	2,286	3,520	2,781	2,641	2,160	1,862	2,173	1,785	1,960
Chittagong Division.													
25	Chittagong ..	22	22	1,055	1,007	2,706	2,218	2,621	2,153	2,301	2,823	2,927	2,882
26	Noakhali ..	15	15	1,699	1,009	2,378	1,453	1,344	1,400	1,429	1,355	2,041	1,275
27	Tippura ..	23	23	4,180	3,046	2,382	2,004	1,956	1,744	2,106	2,150	2,078	2,295
Total for the Bengal Presidency.						68,966	54,815	56,417	53,675	48,819	49,490	48,356	57,605

1 No.	2 Districts.	5				6			7			8 Mean ratio per 1,000 during previous five years.	
		September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.				
						Male.	Female.	Total.	Male.	Female.	Total.		
Burdwan Division.													
1	Burdwan ..	2,092	2,098	3,130	3,107	12,338	12,805	25,143	15.1	16.8	15.9	15.5	
2	Birbhum ..	1,704	1,838	3,036	3,342	10,470	11,007	21,477	22.1	23.2	22.7	19.1	
3	Bankura ..	1,168	1,140	1,740	1,667	7,586	8,074	15,660	13.6	14.5	14.1	14.5	
4	Midnapur ..	3,044	3,938	4,555	4,785	19,144	20,364	39,508	13.5	14.7	14.1	13.7	
5	Hooghly ..	1,065	1,186	1,596	1,510	5,966	6,719	12,685	10.1	12.9	11.4	13.4	
6	Howrah ..	503	474	752	620	3,062	3,037	6,099	5.1	6.1	5.5	8.4	
Presidency Division.													
7	24-Parganas ..	2,150	2,374	2,745	2,934	12,594	12,029	24,623	8.6	9.6	9.1	10.6	
8	Calcutta ..	269	259	277	292	1,828	1,662	3,490	2.2	4.3	2.9	3.8	
9	Nadia ..	2,792	3,429	4,921	5,145	19,183	18,952	38,135	24.3	25.6	24.9	22.1	
10	Murshidabad ..	2,161	2,813	3,531	3,605	15,070	13,858	28,928	22.0	20.2	21.1	20.3	
11	Jessore ..	2,524	3,443	5,181	5,465	18,927	18,489	37,416	21.7	23.1	22.4	24.2	
12	Khulna ..	1,927	2,207	2,852	3,054	9,728	10,401	20,129	11.4	13.4	12.4	12.8	
Rajshahi Division.													
13	Rajshahi ..	3,201	3,068	3,886	4,399	18,767	17,562	36,329	25.3	25.5	25.4	26.3	
14	Dinajpur ..	3,390	2,978	3,788	3,510	19,105	16,709	35,814	20.7	20.1	20.4	27.1	
15	Jalpaiguri ..	1,407	1,193	1,705	1,920	8,154	7,429	15,583	15.3	16.5	15.8	19.7	
16	Darjeeling ..	462	439	514	519	2,786	2,560	5,346	16.4	17.1	16.7	17.5	
17	Rangpur ..	4,489	4,443	4,666	3,745	26,272	25,583	51,855	19.4	20.7	20.0	21.0	
18	Bogra ..	1,765	1,802	1,710	1,729	8,367	7,867	16,234	15.0	14.9	14.9	14.4	
19	Pabna ..	2,609	2,641	2,245	2,811	13,565	12,970	26,535	18.3	18.3	18.3	17.7	
20	Malda ..	1,651	3,120	1,591	2,810	14,043	12,764	26,807	26.6	24.2	25.4	21.1	
Dacca Division.													
21	Dacca ..	3,730	4,516	6,227	6,102	21,253	21,136	42,389	12.2	12.5	12.3	10.7	
22	Mymensingh ..	5,224	4,977	6,816	7,048	30,145	27,681	57,826	11.3	11.2	11.3	11.7	
23	Faridpur ..	3,079	3,330	5,118	4,947	20,053	18,936	38,989	16.6	16.4	16.5	15.6	
24	Bakarganj ..	1,996	1,854	2,871	3,051	15,109	13,545	28,654	10.0	9.4	9.7	12.3	
Chittagong Division.													
25	Chittagong ..	2,447	1,994	2,712	2,718	15,341	15,161	30,502	17.6	16.4	17.0	17.5	
26	Noakhali ..	1,228	1,310	1,542	2,760	9,453	10,062	19,515	11.0	11.9	11.4	13.2	
27	Tippera ..	2,339	2,314	2,347	2,398	13,728	12,385	26,113	8.6	8.2	8.4	8.8	
Total for the Bengal Presidency.		60,416	65,178	82,054	85,993	372,037	359,747	731,784	14.3	15.0	14.7	15.2	

Annual Form No. X.—Deaths registered from DYSENTERY AND DIARRHOEA in the districts of the Bengal Presidency during each month of the year 1931.

1		2		3		4		5					
No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	Aprl.	May.	June.	July.	August.
		Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.								
Burdwan Division.													
1	Burdwan ..	29	29	2,637	459	169	116	147	130	101	70	72	86
2	Birbhum ..	15	15	2,403	276	35	40	36	42	33	42	28	49
3	Bankura ..	22	22	3,479	386	124	169	130	125	92	86	106	176
4	Midnapur ..	39	38	10,590	862	294	422	235	236	190	157	229	316
5	Hooghly ..	28	28	2,190	528	160	138	148	138	89	81	76	134
6	Howrah ..	13	13	1,113	278	359	285	318	217	203	177	214	250
Presidency Division.													
7	24-Parganas ..	63	60	3,292	591	284	213	182	161	137	117	133	182
8	Calcutta ..	1	1	1	1	225	218	281	240	202	203	251	301
9	Nadia ..	30	29	2,410	272	61	34	28	63	52	46	28	34
10	Murshidabad ..	26	26	1,835	127	33	31	32	39	15	22	19	29
11	Jessore ..	26	26	3,596	348	92	42	43	47	32	22	28	24
12	Khulna ..	25	25	2,152	417	95	42	60	40	37	41	41	55
Rajshahi Division.													
13	Rajshahi ..	26	24	4,617	249	44	17	45	49	47	47	41	45
14	Dinajpur ..	31	31	6,578	409	53	123	76	195	55	73	83	151
15	Jalpaiguri ..	18	18	769	420	72	54	80	87	126	204	164	141
16	Darjeeling ..	6	6	533	116	13	12	19	27	68	131	103	88
17	Rangpur ..	32	32	4,074	625	120	91	143	188	185	184	143	141
18	Bogra ..	14	14	2,197	177	105	11	22	59	23	42	42	31
19	Pabna ..	19	19	2,448	163	25	20	35	80	66	42	23	17
20	Malda ..	18	15	2,326	15	27	12	6	8	13	15	7	19
Dacca Division.													
21	Dacca ..	14	14	5,252	990	449	269	316	376	255	222	248	239
22	Mymensingh ..	60	60	8,326	916	204	116	118	174	153	120	147	118
23	Faridpur ..	17	17	3,634	758	236	153	181	190	152	120	115	161
24	Bakarganj ..	22	22	2,974	225	131	79	110	85	68	85	72	50
Chittagong Division.													
25	Chittagong ..	22	22	1,055	224	56	59	81	85	101	100	111	70
26	Noakhali ..	15	15	1,699	286	250	155	145	170	174	188	240	119
27	Tippera ..	23	23	4,180	644	271	183	177	153	240	238	251	225
Total for the Bengal Presidency.						3,987	3,104	3,194	3,404	2,909	2,875	3,015	3,251

1	2	5				6			7			8
No.	Districts.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 during previous five years.
						Male.	Female.	Total.	Male.	Female.	Total.	
1	Burdwan	113	93	133	142	709	663	1,372	.9	.9	.8	.7
2	Birbhum	29	33	19	47	258	175	433	.5	.3	.5	.2
3	Bankura	106	94	90	116	745	669	1,414	1.3	1.1	1.3	1.0
4	Midnapur	277	294	329	427	1,788	1,618	3,406	1.3	1.2	1.2	.7
5	Hooghly	137	152	134	199	718	868	1,586	1.2	1.7	1.5	1.4
6	Howrah	255	226	310	293	1,457	1,650	3,107	2.4	3.3	2.8	3.0
Presidency Division.												
7	24-Parganas	175	205	183	204	1,094	1,082	2,176	.7	.8	.8	.7
8	Caleutta	265	265	249	258	1,479	1,479	2,958	1.8	3.9	2.4	3.0
9	Nadia	61	41	66	49	314	249	563	.4	.3	.3	.4
10	Murshidabad	29	36	37	29	199	152	351	.3	.2	.3	.2
11	Jessore	25	38	74	91	319	239	558	.3	.2	.3	.2
12	Khulna	59	97	188	152	508	399	907	.6	.5	.5	.4
Rajshahi Division.												
13	Rajshahi	37	44	51	41	300	208	508	.4	.3	.3	.2
14	Dinajpur	155	61	122	124	690	581	1,271	.8	.7	.7	.1
15	Jalpaiguri	108	109	142	114	752	649	1,401	1.4	1.5	1.4	1.2
16	Darjeeling	35	28	40	21	312	273	585	1.8	1.8	1.8	1.7
17	Rangpur	158	129	133	92	937	770	1,707	.7	.6	.6	.3
18	Bogra	59	50	46	44	306	228	534	.6	.4	.4	.3
19	Pabna	63	85	71	67	354	240	594	.5	.4	.4	.2
20	Malda	25	23	41	18	115	99	214	.2	.2	.2	.2
Dacca Division.												
21	Dacca	468	745	1,027	847	2,869	2,592	5,461	1.6	1.5	1.6	1.1
22	Mymensingh	263	244	335	251	1,186	1,057	2,243	.4	.5	.4	.4
23	Faridpur	195	235	370	392	1,363	1,137	2,500	1.1	1.0	1.1	.8
24	Bakarganj	54	46	73	123	569	407	976	.4	.3	.4	.3
Chittagong Division.												
25	Chittagong	76	66	58	53	480	436	916	.5	.4	.5	.3
26	Noakhali	124	113	180	396	1,216	1,038	2,254	1.4	1.2	1.3	.5
27	Tippura	227	205	352	247	1,517	1,252	2,769	.9	.8	.9	.6
Total for the Bengal Presidency.		3,578	3,757	4,853	4,837	22,554	20,210	42,764	.9	.8	.9	.7

Annual Form No. XI.—Deaths registered from RESPIRATORY DISEASES in the districts of the Bengal Presidency during each month of the year 1931.

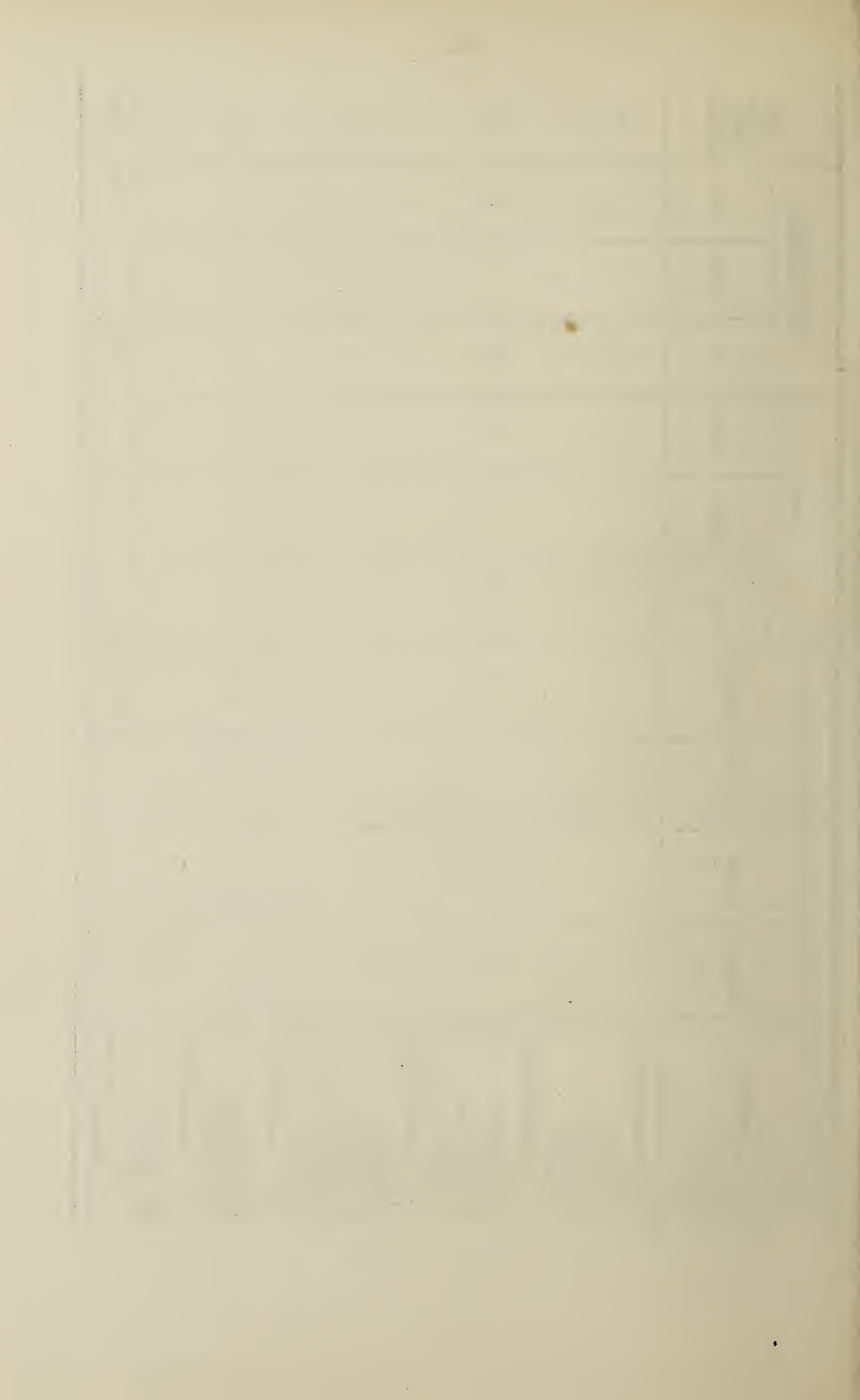
1 No.	2 Districts.	3 Circles of Registration.		4 Villages.		5							
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.	July.	August.
Burdwan Division.													
1	Burdwan ..	29	28	2,637	728	157	221	185	158	139	184	208	217
2	Birbhum ..	15	15	2,403	764	114	129	159	163	169	127	213	220
3	Bankura ..	22	22	3,479	482	137	195	162	173	159	163	179	215
4	Midnapur ..	39	39	10,590	1,033	337	460	342	353	285	251	398	398
5	Hooghly ..	28	28	2,190	715	317	220	248	222	246	190	202	231
6	Howrah ..	13	13	1,113	278	347	364	352	295	240	386	303	313
Presidency Division.													
7	24-Parganas ..	63	62	3,292	690	434	286	289	206	249	365	266	274
8	Calcutta ..	1	1	1	1	812	804	815	693	709	1,083	775	743
9	Nadia ..	30	29	2,410	505	153	146	143	135	96	126	120	181
10	Murshidabad ..	26	24	1,835	292	51	62	40	40	41	53	76	87
11	Jessore ..	26	26	3,596	770	149	104	114	127	93	74	116	96
12	Khulna ..	25	25	2,152	599	125	95	101	93	76	77	113	111
Rajshahi Division.													
13	Rajshahi ..	26	25	4,617	113	34	27	31	45	46	47	43	66
14	Dinajpur ..	31	31	6,578	662	198	372	257	438	122	163	191	395
15	Jalpaiguri ..	18	18	769	310	253	218	329	240	211	266	281	404
16	Darjeeling ..	6	6	533	250	72	64	79	91	83	111	133	131
17	Rangpur ..	32	32	4,074	735	234	282	359	409	334	460	327	284
18	Bogra ..	14	14	2,197	224	128	42	32	33	38	34	31	41
19	Pabna ..	19	19	2,448	118	83	70	62	46	54	68	57	58
20	Malda ..	18	18	2,326	23	20	18	24	15	33	20	35	66
Dacca Division.													
21	Dacca ..	14	14	5,252	775	320	208	260	249	207	219	277	258
22	Mymensingh ..	60	60	8,326	825	228	221	184	145	121	165	120	131
23	Faridpur ..	17	17	3,634	733	232	172	170	172	150	102	152	167
24	Bakarganj ..	22	22	2,974	128	43	40	35	47	50	60	42	20
Chittagong Division.													
25	Chittagong ..	22	19	1,055	125	106	67	79	73	69	105	90	95
26	Noakhali ..	15	15	1,699	246	343	198	137	133	128	142	178	126
27	Tippera ..	23	23	4,180	333	141	65	76	57	86	76	137	180
Total for the Bengal Presidency.						654	645	5,064	4,851	4,234	5,117	5,063	5,508

1 No.	2 Districts.	5				6			7			8 Mean ratio per 1,000 during previous five years.
		September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			
						Male.	Female.	Total.	Male.	Female.	Total.	
Burdwan Division.												
1	Burdwan ..	166	151	244	259	1,505	784	2,289	1.8	1.0	1.4	1.3
2	Birbhum ..	143	119	152	187	1,194	701	1,895	2.5	1.5	2.0	.8
3	Bankura ..	188	144	153	175	1,360	683	2,043	2.4	1.2	1.8	1.4
4	Midnapur ..	318	326	413	437	2,783	1,535	4,318	2.0	1.1	1.5	.9
5	Hooghly ..	228	255	331	408	1,902	1,196	3,098	3.2	2.3	2.8	2.0
6	Howrah ..	303	262	421	429	2,406	1,609	4,015	4.0	3.2	3.6	3.4
Presidency Division.												
7	24-Parganas ..	192	256	338	382	2,228	1,309	3,537	1.5	1.0	1.3	1.2
8	Calcutta ..	709	707	953	962	5,672	4,093	9,765	7.0	10.7	8.2	8.7
9	Nadia ..	132	123	103	182	1,207	433	1,640	1.5	.6	1.1	1.0
10	Murshidabad ..	51	55	43	50	454	195	649	.7	.3	.5	.3
11	Jessore ..	85	94	206	170	1,027	401	1,428	1.2	.5	.8	.4
12	Khulna ..	125	133	157	192	867	531	1,398	1.0	.7	.9	.5
Rajshahi Division.												
13	Rajshahi ..	37	46	62	49	356	177	533	.5	.3	.4	.2
14	Dinajpur ..	338	193	293	249	1,952	1,257	3,209	2.1	1.5	1.8	.4
15	Jalpaiguri ..	297	238	266	208	1,941	1,270	3,211	3.6	2.8	3.3	.4
16	Darjeeling ..	90	103	113	80	593	557	1,150	3.5	3.7	3.6	2.1
17	Rangpur ..	155	136	151	117	1,852	1,396	3,248	1.4	1.1	1.2	.3
18	Bogra ..	59	45	54	80	406	211	617	.7	.4	.6	.4
19	Pabna ..	107	97	74	72	623	225	848	.8	.3	.6	.3
20	Malda ..	22	24	39	25	224	117	341	.4	.2	.3	.2
Dacca Division.												
21	Dacca ..	340	344	390	423	2,162	1,333	3,495	1.2	.8	1.0	.6
22	Mymensingh ..	190	155	169	226	1,419	636	2,055	.5	.2	.4	.2
23	Faridpur ..	229	246	459	393	1,650	994	2,644	1.4	.9	1.1	.7
24	Bakarganj ..	21	23	38	117	339	197	536	.2	.1	.2	.1
Chittagong Division.												
25	Chittagong ..	58	59	82	74	594	363	957	.7	.4	.5	.2
26	Noakhali ..	114	157	169	335	1,172	988	2,160	1.4	1.2	1.3	.3
27	Tipperra ..	146	88	147	73	710	562	1,272	.4	.4	.4	.4
Total for the Bengal Presidency.		4,843	4,579	6,020	6,354	38,598	23,753	62,351	1.5	1.0	1.2	.9

Annual Form No. XII.—Deaths registered from **PLAGUE** in the districts of the Bengal Presidency during each month of the year 1931.

1 No.	2 Districts.	3 Circles of Registration.		4 Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number from which deaths from plague were reported.		Number from which deaths from plague were reported.									
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.								
	Burdwan Division.												
1	Burdwan ..	29	..	2,637	..	..	..	..	..	..	..	..	..
2	Birbhum ..	15	..	2,403	..	..	..	..	..	..	..	..	..
3	Bankura ..	22	..	3,479	..	..	..	..	..	..	..	..	..
4	Midnapur ..	39	..	10,590	..	..	..	..	..	..	..	..	..
5	Hooghly ..	28	..	2,190	..	..	..	..	..	..	..	..	..
6	Howrah ..	13	..	1,113	..	..	..	..	..	..	..	..	..
	Presidency Division.												
7	24-Parganas ..	63	..	3,292	..	..	..	..	1	..	..	..	..
8	Calcutta ..	1	..	1	1	..	..	..	..	..	..	..	..
9	Nadia ..	30	..	2,410	..	..	..	..	..	..	..	..	..
10	Murshidabad ..	26	..	1,835	..	..	..	..	..	..	..	..	..
11	Jessore ..	26	..	3,596	..	..	..	..	..	..	..	..	..
12	Khulna ..	25	..	2,152	..	..	..	..	..	..	..	..	..
	Rajshahi Division.												
13	Rajshahi ..	26	..	4,617	..	..	..	..	..	..	..	..	..
14	Dinajpur ..	31	..	6,578	..	..	..	..	..	..	..	..	..
15	Jalpaiguri ..	18	..	769	..	..	..	..	..	..	..	..	..
16	Darjeeling ..	6	..	533	..	..	..	..	..	..	..	..	..
17	Rangpur ..	32	..	4,074	..	..	..	..	..	..	..	..	..
18	Bogra ..	14	..	2,197	..	..	..	..	..	..	..	..	..
19	Pabna ..	19	..	2,448	..	..	..	..	..	..	..	..	..
20	Malda ..	18	..	2,326	..	..	..	..	..	..	..	..	..
	Dacca Division.												
21	Dacca ..	14	..	5,252	..	..	..	..	..	..	..	..	..
22	Mymensingh ..	60	..	8,326	..	..	..	..	..	..	..	..	..
23	Faridpur ..	17	..	3,634	..	..	..	..	..	..	..	..	..
24	Bakarganj ..	22	..	2,974	..	..	..	..	..	..	..	..	..
	Chittagong Division.												
25	Chittagong ..	22	..	1,055	..	..	..	..	..	..	..	..	..
26	Noakhali ..	15	..	1,699	..	..	..	..	..	..	..	..	..
27	Tippera ..	23	..	4,180	..	..	..	..	..	..	..	..	..
	Total for the Bengal Presidency.	654	1	86,360	1	..	..	..	1	..	..	..	..

1 No.	2 Districts.	5				6			7			8 Mean ratio per 1,000 during previous five years.
		September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			
						Male.	Female.	Total.	Male.	Female.	Total.	
	Burdwan Division.											
1	Burdwan ..	..	..	..	..	..	..	..	..	..	..	.001
2	Birbhum ..	..	..	..	..	..	..	..	..	..	..	..
3	Bankura ..	..	..	..	..	..	..	..	..	..	..	..
4	Midnapur ..	..	..	..	..	..	..	..	..	..	..	..
5	Hooghly ..	..	..	..	..	..	..	..	..	..	..	..
6	Howrah ..	..	..	..	..	..	..	..	..	..	..	..
	Presidency Divislon.											
7	24-Parganas ..	..	..	..	..	1	..	1	.001	..	.001	.001
8	Calcutta ..	..	..	..	..	..	..	..	..	..	..	..
9	Nadia ..	..	..	..	..	..	..	..	..	..	..	..
10	Murshidabad ..	..	..	..	..	..	..	..	..	..	..	..
11	Jessore ..	..	..	..	..	..	..	..	..	..	..	..
12	Khulna ..	..	..	..	..	..	..	..	..	..	..	..
	Rajshahi Division.											
13	Rajshahi ..	..	..	..	..	..	..	..	..	..	..	..
14	Dinajpur ..	..	..	..	..	..	..	..	..	..	..	..
15	Jalpaiguri ..	..	..	..	..	..	..	..	..	..	..	..
16	Darjeeling ..	..	..	..	..	..	..	..	..	..	..	..
17	Rangpur ..	..	..	..	..	..	..	..	..	..	..	.001
18	Bogra ..	..	..	..	..	..	..	..	..	..	..	..
19	Pabna ..	..	..	..	..	..	..	..	..	..	..	..
20	Malda ..	..	..	..	..	..	..	..	..	..	..	..
	Dacca Division.											
21	Dacca ..	..	..	..	..	..	..	..	..	..	..	..
22	Mymensingh ..	..	..	..	..	..	..	..	..	..	..	..
23	Faridpur ..	..	..	..	..	..	..	..	..	..	..	..
24	Bakarganj ..	..	..	..	..	..	..	..	..	..	..	..
	Chittagong Division.											
25	Chittagong ..	..	..	..	..	..	..	..	..	..	..	..
26	Noakhali ..	..	..	..	..	..	..	..	..	..	..	..
27	Tippera ..	..	..	..	..	..	..	..	..	..	..	..
	Total for the Bengal Presidency.	..	..	..	..	1	..	1	.00004	..	.00002	.00002



Appendix II

Statements of vaccination operations in Bengal
for the year 1931-32

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
							15							16	17	18	19	20	21	22	23	24	25	26
RURAL AREAS.													
Burdwan Division.													
1	Burdwan	30,215	16,221	1,728	95.2	53.7	61	1.6	5.7	88,098	60.1	945	.6
2	Asansol												
3	Mining	30,916	14,175	8,143	96.5	45.8		2.7	26.3				
4	Settlement	51,534	26,152	9,782	90.8	50.7	68.3	5.8	19	53,374	57	590	.6
5	Birbhum	37,966	23,522	831	99.6	62	65.7	.5	2.2	52,919	50.4	251	.2
6	Bankura	34,244	128,495	41,879	96.7	54.8	98.5	2.3	17.9	208,332	76.5	2,147	.8
7	Midnapur	13,095	8,863	1,301	96.5	67.7	37.6	1.0	9.9	37,567	41.2	692	.8
	Hooghly												
	Howrah	23,207	10,246	4,850	99.3	44.1	45	.3	20.9	34,208	40.5	1,017	1.2
Presidency Division.													
8	24-Parganas	86,613	45,993	8,615	93.1	53.1	64.5	3.4	9.9	137,484	63.2	1,326	.6
9	Nadia	48,224	28,370	8,478	92.7	58.8	58.1	3.7	17.6	73,847	51.8	510	.4
10	Murshidabad	77,383	35,939	15,989	92.1	46.4	69.5	3.7	20.7	131,638	102.2	1,833	1.4
11	Jessore	198,303	97,741	32,167	96.2	49.2	104.7	1.8	16.2	115,737	70.1	252	.1
12	Khulna	185,192	74,735	33,361	99.7	40.3	82.4	.1	18	130,383	81.9	78	.05
Rajshahi Division.													
13	Rajshahi	42,733	26,037	5,530	98.1	61	49	.8	12.9	85,762	54.4	333	.2
14	Dinajpur	81,839	54,690	7,454	91	66.8	74.4	3.9	9.1	115,976	66.8	908	.5
15	Jalpaiguri	60,504	29,456	6,475	87.2	48.7	58.7	5.6	10.7	39,043	40.5	71	.1
16	Darjeeling	6,282	2,071	1,840	93.7	33	37.4	5.9	29.3	14,171	48.7	38	.1
17	Rangpur	186,547	118,571	30,286	87.1	63.6	92.8	7.6	16.2	162,129	63.2	1,475	.6
18	Bogra	62,260	21,829	11,712	88.2	35.1	74.3	5.6	18.8	46,615	43.7	1,150	1.1
19	Pabna	54,425	25,341	7,004	90.1	46.5	57.4	3.4	12.9	97,686	70.2	1,685	1.2
20	Malda	37,254	13,586	18,850	88.6	36.5	49.3	7.9	5.1	139,894	13.7	917	.9

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	Primary vaccinations.				Unknown.
					Male.	Female.	Total.			Successful.				
										Under one year.	One year and under six years.	Total of all ages.		
1		3	4	5	6	7	8	9	10	11	12	13	14	
Dacca Division.														
21	Dacca ..	3,259,870	1,206	77	205,774	118,801	324,575	4,216	174,252	11,543	123,599	157,911	9,004	
22	Mymensingh ..	4,990,559	806	235	498,309	281,222	779,531	3,317	368,353	13,429	182,896	303,067	38,112	
23	Faridpur ..	2,312,701	987	45	113,756	62,929	176,685	3,926	83,626	3,328	56,765	78,252	3,516	
24	Bakarganj ..	2,871,941	819	60	139,762	74,048	213,810	3,563	163,936	1,844	81,546	151,076	8,627	
Chittagong Division.														
25	Chittagong ..	1,738,864	678	50	117,123	64,662	181,785	3,636	86,696	9,830	64,519	79,478	4,121	
26	Noakhali ..	1,693,565	1,117	58	159,825	67,438	227,263	3,918	100,635	10,153	63,050	87,570	7,903	
27	Tippura ..	3,034,870	1,174	163	268,006	168,411	436,417	2,677	178,330	12,822	129,698	165,155	5,840	
28	Chittagong Hill Tracts	212,922	42	11	7,816	5,549	13,365	1,215	8,453	328	5,381	8,437	8	
Total of Districts		46,602,417	605	1,709	3,246,101	1,825,799	5,071,900	2,968	2,334,594	260,268	1,443,628	2,120,941	119,046	
MUNICIPALITIES.														
Burdwan District.														
	Burdwan ..	39,618	..	3	1,764	1,173	2,937	979	1,105	132	593	1,013	19	
	Kalna ..	9,567	..	1	264	356	620	620	277	76	173	257	..	
	Katwa ..	7,772	..	1	314	142	456	456	235	163	70	233	..	
	Dainhat ..	4,845	..	1	331	151	482	482	278	190	88	278	..	
	Raniganj ..	16,373	..	2	1,318	862	2,180	1,090	580	254	281	560	16	
	Asansol ..	31,286	..	1	5,309	2,016	7,325	7,325	1,465	344	876	1,331	134	
Birbhum District.														
	Suri ..	10,908	..	1	299	194	493	493	154	7	142	154	..	

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
							15							16	17	18	19	20	21	22	23	24	25	26
Dacca Division.													
21	Dacca ..	150,323	63,357	34,569	90.6	42.1	67.9	5.2	23	157,108	48.2	3,447	1.1
22	Mymensingh ..	411,178	221,240	76,947	82.3	53.8	105.1	10.3	18.7	409,238	82	2,276	.4
23	Faridpur ..	93,059	34,849	20,514	93.6	37.4	48.9	4.2	22	102,956	44.5	1,584	.7
24	Bakarganj ..	49,874	29,588	7,294	92.1	59.3	62.9	5.3	14.6	164,869	57.4	191	.1
Chittagong Division.													
25	Chittagong ..	95,127	27,447	23,900	91.7	28.8	61.5	4.7	25.1	89,496	51.5	1,343	.8
26	Noakhali ..	126,632	41,751	46,300	87	33	76.3	7.8	36.6	117,273	69.2	340	.2
27	Tipperra ..	258,087	160,859	24,248	92.6	62.3	107.4	3.3	9.4	265,539	87.5	1,289	.4
28	Chittagong Hill Tracts	4,912	2,360	238	99.8	48	50.7	.1	4.8	10,742	50.4	27*	..
Total of Districts ..		2,737,928	1,383,494	490,285	90.8	50.5	75.2	5.1	17.9	3,082,084	66.1	26,715	.6
MUNICIPALITIES.													
Burdwan District.													
	Burdwan ..	1,832	1,114	170	91.7	60.8	53.7	1.7	9.3	2,037	51.4	13	.3
	Kalna ..	343	129	..	92.8	37.6	40.3	..	..	394	41.2	4	.4
	Katwa ..	221	70	49	99.1	31.7	39	.8	22.2	373	48	9	1.2
	Dainhat ..	204	68	39	100	33.3	71.4	..	19.1	339	70	2	.4
	Raniganj ..	1,600	1,013	80	96.5	63.3	96.1	2.7	5	1,365	83.4	2	.1
	Asansol ..	5,860	993	3,783	90.8	17	74.3	9.1	6.4	1,642	52.5	11	.3
Birbhum District.													
	Suri ..	339	101	130	100	29.8	23.4	..	38.3	748	68.6	4	.4

* Average of previous three years.

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				
					Male.	Female.	Total.		Successful.				
									Under one year.	One year and under six years.	Total of all ages.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Bankura District.													
	Bankura ..	31,703	..	2	2,621	1,134	3,755	1,877	801	216	497	757	..
	Vishnupur ..	19,696	..	1	236	129	365	365	78	9	68	78	..
	Sonamukhi ..	10,989	..	1	228	105	333	333	68	6	35	68	..
Midnapur District.													
	Midnapur ..	32,021	..	2	1,045	485	1,530	765	582	88	478	582	..
	Ghatal ..	12,400	..	1	436	356	792	792	558	83	218	482	..
	Kharar ..	5,736	..	1	46	46	92	92	88	..	81	81	..
	Chandrakona ..	6,016	..	1	217	139	356	356	289	18	245	275	10
	Ramjibanpur ..	6,230	..	1	145	96	241	241	176	12	118	148	..
	Khirpai ..	3,693	..	1	100	51	151	151	68	..	53	53	..
	Tamluk ..	9,095	..	1	1,203	948	2,151	2,151	185	30	136	181	..
Hooghly District.													
	Hooghly-Chinsura ..	32,634	..	3	2,882	1,001	3,883	1,294	1,628	477	897	1,505	50
	Bansbaria ..	14,221	..	1	2,122	673	2,795	2,795	1,176	10	117	142	..
	Arambagh ..	7,461	..	1	281	158	439	439	320	31	289	320	..
	Scrampur ..	39,056	..	2	1,763	847	2,610	1,305	904	298	534	873	4
	Rishra-Konnagar ..	26,868	..	1	355	155	510	510	242	59	147	209	25
	Uttarpara ..	9,350	..	1	207	110	317	317	174	23	143	174	..
	Kotrung ..	7,160	..	1	64	49	113	113	89	32	55	89	..
	Baidyabati ..	18,486	..	1	354	288	642	642	597	133	464	597	..
	Bhadreshwar ..	22,992	..	1	615	409	1,024	1,024	840	84	675	792	45
	Champdani ..	25,365	..	1	1,434	461	1,895	1,895	1,107	166	938	1,107	..
Howrah District.													
	Howrah ..	224,873	..	11	14,120	7,159	21,279	1,934	5,156	2,680	2,145	4,958	68
	Bally ..	30,347	..	1	1,250	359	1,609	1,609	526	39	237	330	25

Serial No.	Urban and rural areas.	Re-vaccinations.			Persons successfully vaccinated per mille of population.	Percentage of un-known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.		
		Total number of vaccinations performed.	Successful.	Unknown.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.	
15	16	17	18	19	20	21	22	23	24	25	26	
Bankura District.												
Bankura ..	2,954	653	142	94.5	22.1	44.5	..	4.8	1,008	31.8	11	.3
Vishnupur ..	287	116	..	100	40.4	9.8	..	..	2,566	130.3	39	2
Sonamukhi ..	265	67	..	100	25.3	12.3	..	..	1,704	155	15	1.4
Midnapur District.												
Midnapur ..	948	540	..	100	57	35	..	..	1,622	50.6	24	.7
Ghatal ..	234	50	..	86.4	21.4	42.9	..	..	429	34.6	5	.4
Kharar ..	4	4	..	92	100	14.8	..	..	291	50.7	8	1.4
Chandrakona ..	67	62	1	95.1	92.5	56	3.4	1.5	341	56.7	6	1
Ramjibanpur ..	65	44	..	84.1	67.7	30.8	17.6	15.7	275	44.1	7	1.1
Kharpai ..	83	58	13	78	70	30.1	..	6.1	149	40.3	1	.3
Tamluk ..	1,966	363	115	97.8	18.5	59.8	..	..	630	69.3	1	.1
Hooghly District.												
Hooghly-Chinsura ..	2,255	723	642	92.4	32.1	68.3	3.1	28.5	3,303	101.2	37	1.1
Bansbaria ..	2,619	1,885	..	80.7	72	142.5	..	..	401	28.2	3	.2
Arambagh ..	119	102	3	100	85.7	56.6	..	2.5	334	44.8	1	.1
Serampur ..	1,706	141	1,348	96.6	8.2	26	.4	79	1,593	40.8	24	.6
Rishra-Konnagar ..	268	151	56	86.4	56.3	13.4	10.3	20.9	1,033	38.4	21	.8
Uttarpara ..	143	32	..	100	22.4	22	..	..	708	75.7	11	11.8
Kotrung ..	24	24	..	100	100	15.8	..	..	449	62.7	2	.3
Baidyabati ..	45	45	..	100	100	34.7	..	..	1,826	98.8	10	.5
Bhadreshwar ..	184	65	89	94.3	35.3	37.3	5.3	48.4	752	32.7	27	1.2
Champdani ..	788	490	127	100	62.2	63	..	16.1	713	28.1	22	.9
Howrah District.												
Howrah ..	16,152	3,271	2,406	96.2	20.2	36.6	1.3	14.9	6,381	28.4	329	1.5
Bally ..	1,083	177	97	62.7	16.3	16.7	4.7	8.9	1,357	44.7	16	.5

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				Unknown.
					Male.	Female.	Total.		Total. number of vaccinations per- formed.	Successful.			
										Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
24-Parganas District.													
	South Suburban	39,499	..	2	1,169	884	2,053	1,026	1,329	703	596	1,308	2
	Tollyganj	24,476	..	2	1,168	548	1,716	858	812	314	470	791	..
	Budge-Budge	24,183	..	1	6,867	447	7,314	7,314	1,883	240	889	1,798	..
	Baranagar ..	37,050	..	3	4,505	1,698	6,203	2,068	1,300	281	988	1,278	4
	Kamarhati	30,354	..	1	561	339	900	900	759	134	608	745	7
	Rajpur ..	11,433	..	1	222	173	395	395	255	26	229	255	..
	Baruipur ..	6,483	..	1	347	246	593	593	227	64	140	223	..
	Jaynagar ..	9,755	..	1	158	111	269	269	225	13	182	206	..
	North Dum Dum	4,535	..	1	83	75	158	158	131	16	113	131	..
	Dum Dum ..	5,350	..	1	418	88	506	506	80	10	56	80	..
	South Dum Dum	18,471	..	1	232	228	460	460	359	132	221	353	..
	Kharda ..	5,998	..	1	107	84	191	191	157	5	133	157	..
	Barrackpur	25,395	..	1	766	297	1,063	1,063	513	143	332	481	..
	Panihati ..	11,699	..	1	698	368	1,066	1,066	381	197	170	372	9
	North Barrackpur	16,258	..	1	670	331	1,001	1,001	631	215	416	631	..
	Titagarh ..	49,584	..	2	1,941	856	2,797	1,398	785	198	587	785	..
	Garulia ..	14,033	..	1	1,515	642	2,157	2,157	486	81	294	486	..
	Naihati ..	30,908	..	2	1,651	346	1,997	998	363	138	211	358	..
	Halisahar ..	16,770	..	1	277	118	395	395	194	8	176	189	3
	Kanchrapara	15,005	..	1	222	150	372	372	334	112	222	334	..
	Bhatpara ..	84,975	..	3	5,009	1,765	6,774	2,258	2,195	621	1,491	2,142	4
	Barasat ..	8,672	..	1	355	150	505	505	281	23	250	277	..
	Gobardanga	4,525	..	1	57	34	91	91	83	33	48	81	..
	Basirhat ..	21,287	..	1	335	272	607	607	495	343	149	491	..
	Baduria ..	13,677	..	1	483	448	931	931	488	261	218	479	..
	Taki ..	8,234	..	1	556	398	954	954	484	70	412	484	..
	Calcutta ..	1,196,734	..	60	112,317	64,145	176,462	2,941	29,416	14,554	10,408	27,482	531

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
15	16	17	18	19	20	21	22	23	24	25	26		
24-Parganas District.													
	South Suburban	743	145	143	98.4	19.5	36.8	.1	19.2	1,320	33.4	12	.3
	Tollyganj	925	55	..	97.4	6	34.6	..	..	1,050	42.9	11	.4
	Budge-Budge	5,431	2,114	..	95.5	39	161.7	..	..	2,256	93.3	4	.2
	Baranagar	4,903	2,448	242	98.3	50	100.6	.3	4.9	2,368	63.9	33	.9
	Kamarhati	141	66	4	98.2	47	26.7	.9	2.8	833	27.4	10	.3
	Rajpur	140	82	2	100	58.6	29.5	..	1.4	390	34.1	7	.6
	Baruipur	366	192	4	98.2	52.5	64	..	1.1	527	81.3	1	.1
	Jaynagar	44	12	8	91.5	27.3	22.3	..	18.2	279	28.6	9	.9
	North Dum Dum	27	27	..	100	100	34.8	..	6.3	183	40.3	3	1.7
	Dum Dum	426	211	27	100	49.5	54.4	..	10.9	..	..	7	1.3
	South Dum Dum	101	49	11	98.3	48.5	21.8	..	..	..	..	8	.4
	Kharda	34	24	..	100	70.6	30.2	..	39.3	..	..	7	1.2
	Barrackpur	550	203	216	93.8	37	26.9	..	..	..	..	11	.4
	Panihati	685	326	..	97.6	47.6	59.6	2.4	..	575	49.1	12	1
	North Barrackpur	370	37	..	100	10	41.1	..	..	430	26.4	18	1.1
	Titagarh	2,012	879	..	100	43.7	33.5	..	..	844	17	40	.8
	Garulia	1,671	1,600	..	100	95.7	148.6	..	..	963	68.6	7	.5
	Naihati	1,634	873	435	98.6	53.4	39.8	..	26.6	1,356	43.9	14	.4
	Halisahar	201	104	25	97.4	51.7	17.5	1.5	12.4	173	10.3	2	.1
	Kanehrapara	38	38	..	100	100	24.8	..	2.2	303	20.2	1	.1
	Bhatpara	4,579	2,056	102	97.6	45	49.4	..	..	3,297	38.8	23	.3
	Barasat	224	140	..	98.6	62.5	48.1	1.4	..	394	45.4	5	.6
	Gobardanga	8	7	..	97.6	87.5	18.1	..	..	67	14.8	..	..
	Basirhat	112	44	3	99.2	39.3	25.1	..	2.7	507	23.8	2	.1
	Baduria	443	91	..	98.1	20.5	41.7	..	..	419	30.6	1	.1
	Taki	470	300	..	100	63.8	95.2	..	..	647	78.6	2	.2
	Calcutta	147,046	47,127	31,789	93.4	32	62.3	1.8	21.6	64,941	54.2	1,588	1.3

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				Unknown.
					Male.	Female.	Total.		Total number of vaccinations performed.	Successful.			
										Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10	11.	12	13	14
Nadia District.													
	Krishnagar	24,284	..	1	4,422	2,848	7,270	7,270	792	217	481	792	..
	Nabadwip	18,861	..	1	486	350	836	836	582	165	412	582	..
	Ranaghat	11,395	..	1	606	291	897	897	605	329	271	602	..
	Birnagar	2,341	..	1	80	73	153	153	129	53	76	129	..
	Santipur	24,992	..	1	201	190	391	391	297	22	233	291	1
	Chakdaha	3,986	..	1	125	54	179	179	122	55	67	122	..
	Kushtia	9,405	..	1	444	144	588	588	201	14	167	194	2
	Kumarkhali	3,362	..	1	313	100	413	413	248	69	169	238	4
	Meherpur	6,205	..	1	160	137	297	297	254	41	204	254	..
Murshidabad District.													
	Berhampur	27,403	..	2	1,320	608	1,928	964	832	78	666	784	..
	Murshidabad	9,483	..	1	211	113	324	324	202	34	135	183	..
	Jiaganj-Azimganj	10,998	..	1	551	460	1,011	1,011	392	196	196	392	..
	Kandi	12,616	..	1	628	457	1,085	1,085	472	171	278	465	1
	Jangipur	12,796	..	1	160	136	296	296	279	37	228	269	..
	Dhulian	9,767	..	1	580	265	845	845	416	99	317	416	..
Jessore District.													
	Jessore	11,356	..	1	356	165	521	521	183	24	105	183	..
	Kotchandpur	6,115	..	1	128	109	237	237	60	16	44	60	..
	Maheshpur	3,321	..	1	65	43	108	108	78	..	58	58	4
Khulna District.													
	Khulna	19,120	..	1	305	155	460	460	183	21	93	169	3
	Satkhira	11,241	..	1	249	169	418	418	332	84	200	332	..
	Debhata	4,954	..	1	492	428	920	920	289	44	192	271	8

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of un-known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
							15							16	17	18	19	20	21	22	23	24	25	26
Nadia District.													
	Krishnagar	6,478	2,979	877	100	46	155.2	..	13.5	1,838	75.7	7	.3
	Nabadwip	254	123	..	100	48.4	37.4	..	..	554	29.4	16	.8
	Ranaghat	292	223	..	99.5	76.4	72.4	..	..	455	39.9	1	.1
	Birnagar	24	16	..	100	66.7	61.9	..	..	165	70.5	..	..
	Santipur	94	27	..	98	28.7	12.7	.3	..	1,214	48.6	17	.7
	Chakdaha	57	38	..	100	66.7	40.1	..	..	153	38.4	..	..
	Kushtia	387	82	116	96.5	21.2	29.3	1	30	293	31.1	4	.4
	Kumarkhali	165	90	37	96	54.5	97.6	1.6	22.4	242	72	..	..
	Meherpur	43	9	..	100	21	42.4	..	..	208	33.5	..	..
Murshidabad District.													
	Berhampur	1,096	198	88	94.2	18.1	35.8	..	8	1,047	38.2	31	1.1
	Murshidabad	122	37	1	90.6	30.3	23.2	..	.8	316	33.3	10	.3
	Jiaganj-Azinganj	619	354	..	100	57.2	67.8	..	..	524	47.6	16	1.4
	Kandi	613	88	21	98.5	14.3	43.8	.2	3.4	657	52.1	6	.5
	Jangipur	17	3	..	96.4	17.6	21.2	..	..	538	42	10	.8
	Dhulian	429	132	..	100	30.8	56.1	..	..	651	66.6	15	1.5
Jessore District.													
	Jessore	338	161	..	100	47.6	30.3	..	..	298	26.2	1	.1
	Kotchandpur	177	103	8	100	58.2	26.6	..	4.5	236	38.6	..	..
	Maheshpur	30	10	5	74.3	33.3	20.4	5.1	16.7	60	18.7	..	..
Khulna District.													
	Khulna	277	12	70	92.3	4.3	9.5	1.6	25.3	342	17.9	3	.2
	Satkhira	86	21	35	100	24.4	31.4	..	40.7	326	29	2	.2
	Debhata	631	184	198	93.8	29.2	91.8	2.8	31.4	551	111.2	..	..

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				Unknown.
					Male.	Female.	Total.		Successful.				
									Total number of vaccinations performed.	Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Rajshahi District.												
	Rajshahi ..	27,064	..	1	1,223	953	2,176	2,176	1,018	358	613	1,008	..
	Nator ..	8,318	..	1	57	48	105	105	86	..	71	84	1
	Dinajpur District.												
	Dinajpur ..	19,156	..	1	920	688	1,608	1,608	535	153	259	515	2
	Jalpaiguri District.												
	Jalpaiguri ..	18,962	..	1	1,067	328	1,395	1,395	404	221	119	400	..
	Darjeeling District.												
	Darjeeling ..	21,185	..	1	3,915	2,324	6,239	6,239	592	432	140	578	14
	Kurseong ..	7,451	..	1	734	633	1,367	1,367	451	292	91	445	6
	Rangpur District.												
	Rangpur ..	20,749	..	1	2,352	406	2,758	2,758	682	66	566	670	4
	Gaibandha ..	8,479	..	1	165	69	234	234	66	3	45	65	1
	Bogra District.												
	Bogra ..	14,819	..	1	1,503	815	2,318	2,318	750	42	530	734	..
	Sherpur ..	4,279	..	1	76	68	144	144	108	3	66	75	2
	Pabna District.												
	Pabna ..	21,904	..	1	2,333	1,640	3,973	3,973	2,896	854	1,496	2,770	..
	Sirajganj ..	32,467	..	2	1,601	906	2,507	1,253	1,817	439	1,257	1,786	18

Serial No.	Urban and rural areas.	Re-vaccinations.			Persons success-fully vaccinated per mille of population.	Percentage of un-known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.			
		Total number of vaccina-tions per-formed.	Successful.	Unknown.		Primary.	Re-vacci-nation.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.		
		15	16	17	18	19	20	21	22	23	24	25	26
	Rajshahi District.												
	Rajshahi ..	1,158	318	114	99	27.5	49	11.2	9.8	1,426	52.7	4	.1
	Nator ..	19	10	3	97.7	52.6	11.3		15.8	251	30.2	2	.2
	Dinaipur District.												
	Dinaipur ..	1,073	380	210	96.3	35.4	46.7	.4	19.6	1,565	81.7	7	.4
	Jalpaiguri District.												
	Jalpaiguri ..	995	266	71	99	26.7	35.1	..	7.1	913	48.1	..	..
	Darjeeling District.												
	Darjeeling ..	5,647	1,343	1,023	97.6	23.8	90.7	2.4	13.1	2,687	126.8	4	.2
	Kurseong ..	916	506	56	98.7	55.2	127.6	1.3	6.1	808	108.6	..	..
	Rangpur District.												
	Rangpur ..	2,076	1,287	236	98.2	62	94.3	.6	11.4	1,830	88.2	4	.2
	Galbandha ..	168	27	14	98.5	16.1	10.8	1.5	8.3	458	54	6	.7
	Bogra District.												
	Bogra ..	1,568	260	118	97.9	16.6	67.1	..	7.5	728	49.1	6	.4
	Sherpur ..	36	14	3	69.4	38.9	20.8	1.8	8.3	115	26.9	2	.5
	Pabna District.												
	Pabna ..	1,077	348	..	95.6	32.3	142.3	..	15.6	1,103	50.3	12	.5
	Sirajganj ..	690	223	108	98.3	32.3	61.9	1		1,659	51.1	17	.5

Serial No.	Urban and rural areas.	3	4	5	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				
					Male.	Female.	Total.		Total number of vaccinations performed.	Successful.			
										Under one year.	One year and under six years.	Total of all ages.	
1	2	10	11	12	13	14	Unknown.						
	Malda District.												
	English Bazar	16,907	..	1	622	185	807	807	317	237	80	317	..
	Malda	2,779	..	1	22	12	34	34	32	9	19	29	..
	Nawabganj	15,826	..	1	429	221	650	650	401	44	346	398	1
	Dacca District.												
	Dacca	138,518	..	7	7,426	5,198	12,624	1,803	5,031	1,892	1,635	3,691	218
	Narayanganj	34,189	..	2	2,547	1,131	3,678	1,839	1,364	289	961	1,281	63
	Mymensingh District.												
	Mymensingh	30,480	..	1	1,325	928	2,253	2,253	652	26	372	474	66
	Muktagacha	6,131	..	1	208	111	319	319	242	4	165	207	24
	Netrakona	10,980	..	1	317	156	473	473	270	65	177	261	..
	Jamalpur	23,077	..	1	605	317	922	922	578	96	482	578	..
	Sherpur	19,547	..	1	643	471	1,114	1,114	425	33	290	419	2
	Kishorganj	15,437	..	1	795	517	1,312	1,312	635	103	327	527	97
	Bajitpur	11,650	..	1	84	81	165	165	165	..	113	152	6
	Tangail	16,082	..	1	442	117	559	559	229	14	159	189	31
	Gauripur	6,319	..	1	410	187	597	597	156	5	55	124	24
	Faridpur District.												
	Faridpur	15,516	..	1	637	371	1,008	1,008	602	121	344	564	..
	Madaripur	26,894	..	1	814	413	1,227	1,227	720	15	626	719	..
	Rajbari	7,104	..	1	352	235	587	587	270	50	144	222	9
	Bakarganj District.												
	Barisal	35,716	..	1	1,236	560	1,796	1,796	304	10	170	281	1
	Jhalakati	6,496	..	1	186	43	229	229	106	2	37	90	3
	Nalchiti	1,946	..	1	39	36	75	75	55	..	31	50	..
	Pirojpur	10,959	..	1	821	293	1,114	1,114	766	370	306	751	15
	Patuakhali	6,434	..	1	324	140	464	464	313	..	62	281	..
	Bhola	5,558	..	1	243	143	386	386	231	..	133	231	..

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of un-known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccine-ations per-formed.	Successful.	Unknown.	Primary.	Re-vacci-nation.		Primary.	Re-vacci-nation.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
							15							16	17	18	19	20	21	22	23	24	25	26
	Malda District.												
	English Bazar ..	490	447	43	100	91.2	45.2	..	8.8	979	57.9	2	.1
	Malda ..	2	1	..	90.6	50	10.8	..	28.1	73	26.3	..	.1
	Nawabganj ..	249	110	70	99.2	44.2	32.1	..	..	1,008	63.7	25	.6
	Dacca District.												
	Dacca ..	7,719	1,212	1,809	73.4	15.7	35.4	4.3	23.4	7,177	51.8	108	.8
	Narayanganj ..	2,314	606	658	94	26.2	55.2	4.6	28.4	2,255	65.9	28	.8
	Mymensingh District.												
	Mymensingh ..	1,601	60	474	72.7	3.7	17.5	10.1	29.6	470	15.4	11	.3
	Muktagaeha ..	77	25	14	85.5	32.5	37.8	9.9	18.2	288	47	4	.6
	Netrakona ..	203	108	..	96.7	53.2	33.6	..	..	329	29.9	3	.3
	Jamalpur ..	344	259	..	100	75.3	36.3	..	..	1,018	44.1	2	.1
	Sherpur ..	689	97	21	98.6	14.1	26.4	..	3	545	27.8	1	.05
	Kishoriganj ..	677	135	209	83	20	42.9	15.3	30.9	697	45.1	2	.1
	Bajitpur ..	..	..	..	92.1	..	13	3.6	27.6	135	11.6	7	.6
	Tangal ..	330	138	91	82.5	41.8	20.3	13.5	22.7	408	25.3	4	.2
	Gauripur ..	441	74	100	79.5	16.8	31.3	15.4	..	255	101	..	..
	Faridpur District.												
	Faridpur ..	444	42	108	93.7	94.6	39.1	..	24.3	590	38.0	2	.1
	Madaripur ..	507	58	..	99.9	11.4	28.9	..	8.5	894	33.2	3	.1
	Rajbari ..	317	109	27	82.2	34.4	46.6	3.3	..	193	27.2	2	.2
	Bakarganj District.												
	Barisal ..	1,492	326	72	92.4	21.8	17	.3	4.8	1,409	39.4	6	.1
	Jhalakati ..	123	19	7	84.9	15.4	16.8	2.8	5.7	158	24.3	1	.1
	Nalehiti ..	20	9	..	90.9	45	30.3	..	..	108	55.5	..	..
	Pirojpur ..	348	80	98	98	23	75.8	1.9	28.2	719	65.6	..	..
	Patuakhali ..	151	60	1	89.8	39.7	53	..	.7	174	27.	..	..
	Bhola ..	155	43	..	100	27.7	49.3	..	..	227	40.8	1	.2

Serial No.	Urban and rural areas.	Population according to Census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary vaccinations.				
					Male.	Female.	Total.		Total number of vacci- nations performed.	Successful.			
										Under one year.	One year and under six years.	Total of all ages.	Unknown.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Chittagong District.												
	Chittagong ..	53,156	..	2	2,101	820	2,921	1,460	1,184	89	941	1,046	44
	Cox's Bazar ..	5,018	..	1	284	49	333	333	89	28	60	89	..
	Noakhali District.												
	Noakhali ..	13,063	..	2	1,267	275	1,542	771	409	19	251	323	21
	Tippera District.												
	Comilla ..	31,365	..	1	740	450	1,190	1,190	920	114	720	883	2
	Brahmanbaria ..	26,662	..	1	891	603	1,494	1,494	1,100	58	764	884	76
	Chandpur ..	16,838	..	1	816	304	1,120	1,120	508	76	367	478	8
	Total of Municipalities ..	3,511,585	..	214	238,466	125,833	364,299	1,702	97,819	32,995	50,784	91,479	1,752
	Grand Total for the Presidency (Rural areas and Municipalities) ..	50,114,002	646	1,923	3,484,567	1,951,632	5,436,199	2,327	2,432,413	293,263	1,494,412	2,212,420	120,798
	Other Agencies.												
	Tea-gardens ..	..	..	..	..	..	18,252	..	11,207	..	..	9,847	921
	Factories ..	..	..	..	..	..	35,365	..	3,956	..	..	3,377	579
	Steamers ..	..	..	..	..	..	576	..	..	..	..	..	..
	Railways ..	..	..	..	..	..	9,173	..	2,473	..	..	1,624	52
	Jails ..	..	..	..	..	..	42,090	..	980	..	..	881	61
	Dispensaries ..	..	..	..	..	..	30	..	..	..	..	..	..
	Total ..	..	..	..	..	..	105,486	..	18,616	..	..	15,729	1,613

Serial No.	Urban and rural areas.	Re-vaccinations.			Percentage of successful cases in which results were known.		Persons successfully vaccinated per mille of population.	Percentage of un-known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
		15	16	17	18	19	20	21	22	23	24	25	26
	Chittagong District.												
	Chittagong ..	1,757	295	568	88.3	16.8	25.2	3.7	32.3	1,982	37.3	10	.2
	Cox's Bazar ..	244	36	67	100	14.7	24.9	..	27.5	299	59.6	1	.2
	Noakhali District.												
	Noakhali ..	1,113	228	492	79	20.1	42.2	5.1	43.4	1,240	94.9	3	.2
	Tippera District.												
	Comilla ..	270	89	51	96	33	31	.2	18.9	738	23.5	1	.03
	Brahmanbaria ..	394	128	84	80.4	32.5	37.9	6.9	21.3	947	35.5	6	.2
	Chandpur ..	612	172	152	94.1	28.1	33.6	1.6	24.8	640	38	1	.1
	Total of Municipalities ..	266,773	86,639	50,929	93.5	32.5	50.7	1.8	19.1	170,139	48.4	2,940	.8
	Grand Total for the Presidency (Rural areas and Municipalities) ..	3,004,701	1,470,133	541,214	90.9	48.9	73.5	5	18	3,252,223	64.9	29,655	.6
	Other Agencies.												
	Tea-gardens ..	7,045	3,165	1,632	87.9	44.9	..	8.2	23.2	..	..	..	..
	Factories ..	31,409	11,932	19,477	85.4	37.9	..	14.6	62	..	..	..	..
	Steamers ..	576	..	576	..	..	..	..	100	..	..	..	..
	Railways ..	6,700	2,916	2,392	65.7	43.5	..	2.1	35.7	..	..	..	..
	Jails ..	41,110	21,674	5,692	90	52.7	..	6.2	13.8	..	..	..	..
	Dispensaries ..	30	30	..	..	100	..	..	..	..	..	..	..
	Total ..	86,870	39,717	29,769	84.5	45.7	..	8.7	34.3	..	..	..	..

Summary of vaccinations performed in the Presidency of Bengal during the year 1931-32.

Agencies.	Total number of persons vaccinated.			Total number of vaccinations performed.			Percentage of successful cases in which results were known.			Average number of vaccinators employed.	Average number of persons vaccinated by each vaccinator.	Number of children successfully vaccinated.		Ratio of successful vaccinations per mille of population.	Total cost of department.	Average cost of each successful vaccination.
	2 Primary.	3 Re-vaccinations.	4 Total.	5 Primary.	6 Re-vaccinations.	7 Total.	8 Primary.	9 Re-vaccinations.	10 Total.							
												13 Under one year.	14 One year and under six years.			
1	8,453	4,912	13,365	8,453	4,912	13,365	99·8	48	80·8	11	1,215	328	5,301	50·7	Rs. 4,74,355-1-11.	Re. 0-2-0.
I. Government staff	2,423,045	2,999,789	5,422,834	2,423,960	2,999,789	5,423,749	90·5	48·9	67·7	1,912	2,837	292,935	1,489,031	73·5		
II. Local (Municipal and District Board staff and Asansol Mines Board of Health) ..	18,616	86,870	105,486	18,616	86,870	105,486	84·5	45·7	52·6			Unknown				
III. Other agencies— Tea Gardens, Factories, Steamers, Railways, Jails, and Dispensaries																
Total ..	2,450,114	3,091,571	5,541,685	2,451,029	3,091,571	5,542,600	90·9	48·8	67·4	1,923	2,827	293,263	1,494,412	74·6	..	..

STATEMENT No. II

Showing the cost of vaccination in the Presidency of Bengal during the year 1931-32.

Urban and rural areas.		Expenditure.							
		Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.	Travelling allowance.
		Number.	Pay.	Number.	Pay.	Number.	Pay.		
1	2	3	4	5	6	7	8	9	
RURAL AREAS.									
Burdwan Division.									
Burdwan ..	2	Rs. A. P.	36	8,584 5 0	..	..	10,009 10 0	2,269 9 0	
Asansol Mining Settlement ..	..	1,425 5 0	14	4,200 0 0	..	..	4,200 0 0	1,680 0 0	
Birbhum ..	2	960 0 0	19	2,304 15 0	..	..	3,264 15 0	677 2 0	
Bankura ..	1	781 4 0	43	4,203 0 0	..	..	4,984 4 0		
Midnapur ..	4	1,657 8 0	99	9,878 7 6	..	..	11,535 15 6	1,545 14 3	
Hooghly ..	2	1,000 0 0	31	3,001 7 0	..	..	4,001 7 0	583 12 0	
Howrah ..	2	1,317 11 10	27	5,284 0 0	..	..	6,601 11 10	..	
Presidency Division.									
24-Parganas ..	5	3,291 11 0	72	12,254 14 0	..	..	15,546 9 0	1,256 2 0	
Nadia ..	5	2,455 10 0	51	7,340 6 0	..	..	9,796 0 0	1,890 3 0	
Murshidabad ..	5	2,160 0 0	83	9,600 10 0	..	..	11,760 10 0	2,580 0 0	
Jessore ..	2	840 0 0	96	8,469 12 0	..	..	9,309 12 0	600 0 0	
Khulna ..	4	1,406 3 0	105	8,216 8 0	..	..	9,622 11 0	1,243 11 0	
Rajshahi Division.									
Rajshahi ..	3	1,500 0 0	31	5,724 0 0	..	..	7,224 0 0	2,316 0 0	
Dinajpur ..	3	1,536 0 0	48	4,839 13 0	..	..	6,375 13 0	830 9 0	
Jalpaiguri ..	1	409 7 0	52	5,282 14 0	..	..	5,692 5 0	253 6 0	
Darjeeling ..	3	1,560 0 0	16	2,873 4 0	..	..	4,433 4 0	2,246 15 0	
Rangpur ..	3	1,382 9 0	110	8,002 12 0	..	..	9,385 5 0	508 0 0	
Bogra ..	2	990 0 0	21	3,534 14 0	1	120 0 0	4,644 14 0	735 6 0	
Pabna ..	2	1,200 0 0	39	5,311 8 0	..	..	6,511 8 0	704 12 0	
Malda ..	2	1,020 0 0	17	2,910 13 6	..	..	3,930 13 6	900 0 0	
Dacca Division.									
Dacca ..	4	2,160 0 0	77	5,322 15 0	..	..	7,482 15 0	1,164 0 0	
Mymensingh ..	6	3,239 8 0	235	21,657 4 0	..	..	24,896 12 0	1,768 2 0	
Faridpur ..	4	1,800 0 0	45	4,631 0 0	..	..	6,431 0 0	1,518 5 0	
Bakarganj ..	3	1,566 12 0	60	6,373 2 0	..	..	7,939 14 0	1,358 13 0	

Urban and rural areas.	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.											
	Contingencies.	Miscella- neous.	Total cost.	Provincial fund.	District fund.	Municipal fund.	Total.													
								10	11	12	13	14	15	16	17	18				
								Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
RURAL AREAS.																				
Burdwan Division.																				
Burdwan ..	149	0	0	..	0	0	3,946	7	0	8,481	12	0	..	12,428	3	0	59,944	0	3	3
Asansol Mining Settlement ..	2,205	0	0	2,036	0	0	..	6	0	10,121	0	0	..	10,121	0	0	29,512	0	5	5
Birbhum ..	58	10	0	..	..	..	2,365	..	..	1,635	5	0	..	4,000	11	0	63,996	0	1	0
Bankura ..	..	..	..	..	..	..	2,281	4	0	2,703	0	0	..	4,984	4	0	68,928	0	1	1
Midnapur ..	190	4	6	..	..	..	5,616	4	0	7,655	14	3	..	13,272	2	3	268,443	0	0	9
Hooghly ..	120	15	0	..	..	..	2,240	0	0	2,466	2	0	..	4,706	2	0	34,249	0	2	2
Howrah ..	..	..	..	..	..	..	3,010	0	0	3,591	11	10	..	6,601	11	10	37,895	0	2	9
Presidency Division.																				
24-Parganas ..	992	9	0	..	..	..	6,899	2	0	10,896	2	0	..	17,795	4	0	140,424	0	2	0
Nadia ..	142	9	0	..	..	..	4,064	1	0	7,764	11	0	..	11,828	12	0	82,829	0	2	3
Murshidabad ..	226	10	0	..	..	..	6,221	0	0	8,346	4	0	..	14,567	4	0	89,468	0	2	7
Jessore ..	370	12	0	..	..	..	3,765	0	0	6,515	8	0	..	10,280	8	0	172,803	0	0	11
Khulna ..	298	1	0	..	..	..	3,584	10	0	7,579	13	0	..	11,164	7	0	131,019	0	1	4
Rajshahi Division.																				
Rajshahi ..	1,614	3	0	..	..	..	4,887	0	0	6,267	3	0	..	11,154	3	0	68,268	0	2	7
Dinajpur ..	121	6	0	..	..	..	2,366	9	0	4,961	3	0	..	7,327	12	0	129,315	0	0	10
Jalpaiguri ..	273	8	0	..	..	..	1,375	0	0	4,844	3	0	..	6,219	3	0	56,625	0	1	9
Darjeeling ..	104	9	0	..	..	..	3,041	11	0	3,743	1	0	..	6,784	12	0	10,889	0	9	11
Rangpur ..	..	..	..	..	..	..	3,803	8	0	6,089	13	0	..	9,893	5	0	238,111	0	0	7
Bogra ..	0	15	0	..	..	..	2,600	0	0	2,781	3	0	..	5,381	3	0	79,302	0	1	1
Pabna ..	550	1	9	..	..	..	3,802	10	0	3,963	11	9	..	7,766	5	9	79,812	0	1	6
Malda ..	36	1	9	..	..	..	2,850	0	0	2,016	15	3	..	4,866	15	3	50,196	0	1	6
Dacca Division.																				
Dacca ..	292	10	0	..	..	..	5,134	0	0	3,805	9	0	..	8,939	9	0	221,268	0	0	7
Mymensingh ..	784	6	0	..	..	..	10,322	10	0	17,126	10	0	..	27,449	4	0	524,307	0	0	10
Faridpur ..	770	11	0	..	..	..	4,133	5	0	4,586	11	0	..	8,720	0	0	113,101	0	1	2
Bakarganj ..	224	10	0	..	..	..	2,792	2	0	6,731	3	0	..	9,523	5	0	180,664	0	0	10

Expenditure.										
Urban and rural areas.	Vaccination inspecting staff.			Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.	Travelling allowance.	
	Number.	Pay.	Rs. A. P.	Number.	Pay.	Rs. A. P.	Number.			Pay.
1	2	3		4	5		6	7	8	9
Chittagong Division.										
Chittagong ..	3	1,566 12 0		50	4,968 14 0		..	..	6,534 10 0	964 0 0
Noakhali ..	1	480 0 0		58	5,654 3 0		..	..	6,134 3 0	270 0 0
Tippera ..	3	1,440 0 0		163	9,993 3 0		..	..	11,433 3 0	913 8 0
Chittagong Hill Tracts ..	3	1,680 0 0		11	1,483 12 0		..	..	3,163 12 0	1,468 1 0
Total of the Rural Areas ..	80	40,826 4 10		1,709	1,81,902 8 0		1	120 0 0	2,22,848 12 10	32,246 2 3
MUNICIPALITIES.										
Burdwan District.										
Burdwan ..	..	..		3	696 0 0		..	..	696 0 0	180 0 0
Kalna ..	..	..		1	196 0 0		..	..	196 0 0	..
Katwa ..	..	..		1	120 0 0		..	..	120 0 0	..
Dainhat ..	..	..		1	80 0 0		..	..	80 0 0	..
Raniganj ..	..	..		2	562 8 0		..	..	562 8 0	..
Asansol ..	..	..		1	306 7 0		..	..	306 7 0	50 0 0
Birbhum District.										
Suri ..	..	..		1	120 0 0		..	..	120 0 0	..
Bankura District.										
Bankura ..	..	..		2	276 10 0		..	..	276 10 0	60 0 0
Vishnupur ..	..	..		1	192 0 0		..	..	192 0 0	..
Sonamukhi ..	..	..		1	132 0 0		..	..	132 0 0	..
Midnapur District.										
Midnapur ..	..	..		2	271 0 0		..	..	271 0 0	..
Ghatal ..	..	..		1	180 0 0		..	..	180 0 0	..
Kharar ..	..	..		1	55 12 0		..	..	55 12 0	..
Chandrakona ..	..	..		1	58 1 0		..	..	58 1 0	..
Ramjibanpur ..	..	..		1	61 4 0		..	..	61 4 0	..
Khirpai ..	..	..		1	37 13 0		..	..	37 13 0	..
Tamluk ..	..	..		1	240 0 0		..	..	240 0 0	..

Urban and rural areas.	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful casc.
	Contingencies.	Miscellaneous.	Total cost.	Provincial fund.	District fund.	Municipal fund.	Total.		
10	11	12	13	14	15	16	17	18	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	
Chittagong ..	25 0 0	..	7,524 10 0	4,217 12 0	3,306 14 0	..	7,524 10 0	106,925	0 1 1
Noakhali ..	56 5 0	..	6,470 8 0	1,985 0 0	4,485 8 0	..	6,470 8 0	129,321	0 0 9
Tippera ..	814 9 0	..	13,161 4 0	5,191 0 0	7,970 4 0	..	13,161 4 0	326,024	0 0 7
Chittagong Hill Tracts ..	131 0 0	..	4,762 13 0	4,762 13 0	..	..	4,762 13 0	10,797	0 7 0
Total of the Rural Areas ..	10,564 6 0	2,036 0 0	2,67,695 5 1	1,07,258 2 0	1,60,437 3 1	..	2,67,695 5 1	3,504,435	0 1 2
MUNICIPALITIES.									
Burdwan District.									
Burdwan ..	18 8 0	..	894 8 0	..	..	894 8 0	894 8 0	2,127	0 6 8
Kalna ..	..	..	196 0 0	..	..	196 0 0	196 0 0	386	0 8 1
Katwa ..	..	..	120 0 0	..	..	120 0 0	120 0 0	303	0 6 4
Dainhat ..	9 4 6	..	89 4 6	..	..	89 4 6	89 4 6	346	0 4 1
Raniganj ..	0 12 0	..	563 4 0	..	..	563 4 0	563 4 0	1,573	0 5 8
Asansol ..	20 5 0	..	376 12 0	..	..	376 12 0	376 12 0	2,324	0 2 7
Birbhum District.	12 15 0	..	132 15 0	..	..	132 15 0	132 15 0	255	0 8 4
Suri ..	..	..	..	..	..	..	..	..	..
Bankura District.									
Bankura ..	2 0 0	..	338 10 0	..	..	338 10 0	338 10 0	1,410	0 3 10
Vishnupur ..	..	..	192 0 0	..	..	192 0 0	192 0 0	194	0 15 10
Sonamukhi ..	18 0 0	..	150 0 0	..	..	150 0 0	150 0 0	135	1 1 9
Midnapur District.									
Midnapur ..	..	..	271 0 0	..	..	271 0 0	271 0 0	1,122	0 3 10
Ghatal ..	8 5 0	..	188 5 0	..	..	188 5 0	188 5 0	532	0 5 7
Kharar ..	2 15 0	..	58 11 0	..	..	58 11 0	58 11 0	85	0 11 0
Chandrakona ..	0 4 0	..	58 5 0	..	..	58 5 0	58 5 0	337	0 2 9
Ramjibanpur ..	..	..	61 4 0	..	..	61 4 0	61 4 0	192	0 5 1
Khirpai ..	..	..	37 13 0	..	..	37 13 0	37 13 0	111	0 5 5
Tamluk ..	62 10 0	..	302 10 0	..	..	302 10 0	302 10 0	544	0 8 10

Expenditure.									
Urban and rural areas.	Vaccination inspecting staff.			Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.	Travelling allowance.
	Number.	Pay.	Rs. A. P.	Number.	Pay.	Rs. A. P.	Number.			Pay.	Rs. A. P.
								2	3
1									
Hooghly District.									
Hooghly-Chinsura	2	1,500 0 0	3	304 0 0	..	..	1,804 0 0	192 0 0	0 0
Bansbaria	1	216 0 0	..	..	216 0 0	36 0 0	0 0
Arambagh	1	180 0 0	..	..	180 0 0	..	..
Serampur	2	704 0 0	..	..	704 0 0	..	..
Rishra-Konnagar	1	288 0 0	..	..	288 0 0	60 0 0	0 0
Uttarpura	1	168 0 0	..	..	168 0 0	..	..
Kotrung	1	144 0 0	..	..	144 0 0	..	..
Baidyabati	1	192 0 0	..	..	192 0 0	..	..
Bhadreshwar	1	312 0 0	..	..	312 0 0	..	..
Champdani	1	276 0 0	..	..	276 0 0	..	..
Howrah District.									
Howrah	1	850 0 0	11	5,994 0 0	..	..	6,844 0 0	120 0 0	0 0
Bally	1	307 0 0	..	..	307 0 0	..	..
24-Parganas District.									
South Suburban	1	240 0 0	2	456 0 0	..	..	696 0 0	..	..
Tollyganj	2	624 0 0	..	..	624 0 0	..	..
Budge-Budge	1	300 0 0	..	..	300 0 0	..	..
Baranagar	3	1,164 0 0	..	..	1,164 0 0	..	..
Kamarhati	1	324 0 0	..	..	324 0 0	..	..
Rajpur	1	74 8 0	..	..	74 8 0	..	..
Baruipur	1	48 0 0	..	..	48 0 0	..	..
Jaynagar	1	90 0 0	..	..	90 0 0	..	..
North Dum-Dum	1	60 8 0	..	..	60 8 0	..	..
Dum-Dum	1	73 7 0	..	..	73 7 0	..	..
South Dum-Dum	1	300 0 0	..	..	300 0 0	50 4 0	0 0
Khardah	1	220 0 0	..	..	220 0 0	..	..
Barrackpur	1	360 0 0	..	..	360 0 0	..	..
Panihati	1	216 0 0	..	..	216 0 0	..	..
North Barrackpur	1	300 0 0	..	..	300 0 0	60 0 0	0 0
Titagarh	2	563 9 0	..	..	563 9 0	..	..
Garulia	1	240 0 0	..	..	240 0 0	..	..
Nalhati	2	421 5 0	..	..	421 5 0	..	..
Halisahar	1	216 0 0	..	..	216 0 0	..	..
Kanchrapara	1	263 0 0	..	..	263 0 0	..	..
Bhatpara	3	722 0 0	..	..	722 0 0	..	..
Barasat	1	90 0 0	..	..	90 0 0	..	..

Urban and rural areas.	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.									
	Contingencies.	Miscellaneous.	Total cost.	Provincial fund.	District fund.	Municipal fund.	Total.											
										10	11	12	13	14	15	16	17	18
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Hooghly District.																		
Hooghly-Chinsura			1,996	0	0	1,996	0	0
Bansbaria			252	0	0	252	0	0
Arambagh	6	8	0	..		..			..			186	8	0	186	8	0
Scrampur	5	3	0	..		..			..			709	3	0	709	3	0
Rishra-Konnagar	2	0	0	..		..			..			350	0	0	350	0	0
Uttarpara	4	0	0	..		..			..			172	0	0	172	0	0
Kotrung	2	0	0	..		..			..			146	0	0	146	0	0
Baidyabati			192	0	0	192	0	0
Bhadreshwar	3	4	0	..		..			..			315	4	0	315	4	0
Champdani	8	2	0	..		..			..			284	2	0	284	2	0
Howrah District.																		
Howrah			53	2	0	..			6,910	14	0	6,964	0	0
Bally	0	8	0	..		..			..			307	8	0	307	8	0
24-Parganas District.																		
South Suburban	49	8	0	..		..			..			745	8	0	745	8	0
Tollyganj	11	8	0	..		..			..			635	8	0	635	8	0
Budge-Budge	2	3	0	..		..			..			302	3	0	302	3	0
Baranagar	51	13	0	..		..			..			1,215	13	0	1,215	13	0
Kamarhati	8	9	0	..		..			..			332	9	0	332	9	0
Rajpur	0	12	0	..		..			..			75	4	0	75	4	0
Baruipur	0	8	0	..		..			..			48	8	0	48	8	0
Jaynagar			90	0	0	90	0	0
North Dum-Dum	1	2	0	..		..			..			61	10	0	61	10	0
Dum-Dum			73	7	0	73	7	0
South Dum-Dum	25	4	0	..		..			..			375	8	0	375	8	0
Khardah	1	13	0	..		..			..			221	13	0	221	13	0
Barrackpur			360	0	0	360	0	0
Panihati	5	0	0	..		..			..			221	0	0	221	0	0
North Barrackpur	10	0	0	..		..			..			370	0	0	370	0	0
Titagarh			563	9	0	563	9	0
Garulia			240	0	0	240	0	0
Naihati	5	4	0	..		..			..			426	9	0	426	9	0
Halisahar	2	0	0	..		..			..			218	0	0	218	0	0
Kanchrapara	0	8	0	..		..			..			263	8	0	263	8	0
Bhatpara	46	0	0	..		..			..			768	0	0	768	0	0
Barasat			90	0	0	90	0	0

Expenditure.									
Urban and rural areas.	Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.	Total pay of establishment.	Travelling allowance.		
	Number.		Pay.						
	2	3	4	5				6	7
1						8	9		
24-Parganas District.									
Gobardanga	1	59 4 0	..	59 4 0	..		
Basirhat	1	288 0 0	..	288 0 0	..		
Baduria	1	216 0 0	..	216 0 0	..		
Taki	1	66 0 0	..	66 0 0	..		
Calcutta ..	18	28,105 0 0	60	46,650 0 0	30	80,490 0 0	2,000 0 0		
Nadia District.									
Krishnagar	1	567 0 0	..	567 0 0	..		
Nabadwip	1	264 0 0	..	264 0 0	..		
Ranaghat	1	228 0 0	..	228 0 0	..		
Birnagar	1	60 0 0	..	60 0 0	..		
Santipur	1	240 0 0	..	240 0 0	24 0 0		
Chakdahah	1	60 0 0	..	60 0 0	..		
Kushtia	1	264 0 0	..	264 0 0	..		
Kumarkhali	1	80 0 0	..	80 0 0	..		
Meherpur	1	45 0 0	..	45 0 0	..		
Murshidabad District.									
Berhampur	2	528 14 0	..	528 14 0	48 0 0		
Murshidabad	1	156 0 0	..	156 0 0	..		
Jiaganj-Azimgan	1	177 3 0	..	177 3 0	..		
Kandi	1	168 0 0	..	168 0 0	..		
Jangipur	1	192 0 0	..	192 0 0	..		
Dhulian	1	106 0 0	..	106 0 0	..		
Jessore District.									
Jessore	1	213 0 0	..	213 0 0	..		
Kotchandpur	1	90 0 0	..	90 0 0	2 0 0		
Maheshpur	1	22 7 0	..	22 7 0	..		
Khuina District.									
Khulna	1	242 0 0	..	242 0 0	..		
Satkhira	1	48 0 0	..	48 0 0	..		
Debhata	1	46 12 0	..	46 12 0	..		
Rajshahi District.									
Rajshahi	1	409 9 3	..	409 9 3	60 0 0		
Nator	1	240 0 0	..	240 0 0	..		

Urban and rural areas.	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.							
	Contingencies.	Miscellaneous.	Total cost.	Provincial fund.	District fund.	Municipal fund.	Total.									
	10	11	12	13	14	15	16	17	18							
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.				
24-Parganas District.																
Gobardanga	0	7	0	..	59	11	0	..	59	11	0	88	0	10	10
Basirhat	4	4	0	..	292	4	0	..	292	4	0	535	0	8	11
Baduria	1	12	0	..	217	12	0	..	217	12	0	570	0	6	1
Taki	4	6	0	..	70	6	0	..	70	6	0	784	0	1	5
Calcutta	3,700	0	0	..	86,190	0	0	..	86,190	0	0	74,609	1	2	12
Nadia District.																
Krishnagar	567	0	0	..	567	0	0	3,771	0	2	5
Nabadwip	264	0	0	..	264	0	0	705	0	5	11
Ranaghat	228	0	0	..	228	0	0	825	0	4	5
Birnagar	3	2	0	..	63	2	0	..	63	2	0	145	0	7	0
Santipur	77	12	0	..	341	12	0	..	341	12	0	318	1	1	1
Chakdaha	7	6	0	..	67	6	0	..	67	6	0	160	0	6	8
Kushtia	6	9	0	..	270	9	0	..	270	9	0	276	0	15	9
Kumarkhali	3	0	0	..	83	0	0	..	83	0	0	328	0	4	0
Meherpur	1	4	0	..	46	4	0	..	46	4	0	263	0	2	9
Murshidabad District.																
Berhampur	2	3	0	..	579	1	0	..	579	1	0	982	0	9	5
Murshidabad	9	0	0	..	165	0	0	..	165	0	0	220	0	12	0
Jhaganj-Azinganj	2	8	0	..	179	11	0	..	179	11	0	746	0	3	10
Kandi	1	6	0	..	169	6	0	..	169	6	0	553	0	4	10
Jangipur	16	9	0	..	208	9	0	..	208	9	0	272	0	9	2
Dhulian	4	0	0	..	110	0	0	..	110	0	0	586	0	3	0
Jessore District.																
Jessore	213	0	0	..	213	0	0	344	0	9	11
Kotchandpur	92	0	0	..	92	0	0	163	0	9	0
Maheshpur	22	7	0	..	22	7	0	263	0	1	4
Khulna District.																
Khulna	242	0	0	..	242	0	0	181	1	5	4
Satkhira	48	0	0	..	48	0	0	353	0	2	2
Debhata	46	12	0	..	46	12	0	455	0	1	7
Rajshahi District.																
Rajshahi	3	13	6	..	473	6	9	..	473	6	9	1,326	0	5	8
Nator	10	0	0	..	250	0	0	..	250	0	0	94	2	10	6

Expenditure.									
Urban and rural areas.		Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.	Travelling allowance.
1		Number.	Pay.	Number.	Pay.	Number.	Pay.	8	9
Dinajpur District.			Rs. A. P.					Rs. A. P.	Rs. A. P.
Dinajpur	..	..	..	1	240 0 0	..	..	240 0 0	60 0 0
Jalpaiguri District.									
Jalpaiguri	..	..	..	1	240 0 0	..	..	240 0 0	36 0 0
Darjeeling District.									
Darjeeling	..	..	..	1	501 13 0	1	180 0 0	681 13 0	173 11 6
Kurseong	..	..	..	1	480 0 0	..	..	480 0 0	..
Rangpur District.									
Rangpur	..	..	..	1	552 0 0	..	..	552 0 0	..
Gaibandha	..	..	..	1	20 0 0	..	..	20 0 0	..
Bogra District.									
Bogra	..	..	..	1	157 0 0	..	..	157 0 0	..
Sherpur	..	..	..	1	122 0 0	..	..	122 0 0	..
Pabna District.									
Pabna	..	..	..	1	218 0 0	..	..	218 0 0	..
Sirajganj	..	..	..	2	358 0 0	..	..	358 0 0	..
Malda District.									
English Bazar	..	..	..	1	240 0 0	..	..	240 0 0	..
Malda	..	..	..	1	9 6 0	..	..	9 6 0	..
Nawabganj	..	..	..	1	228 0 0	..	..	228 0 0	..
Dacca District.									
Dacca	..	1	306 0 0	7	2,040 0 0	..	..	2,346 0 0	60 0 0
Narayanganj	..	..	..	2	576 0 0	..	..	576 0 0	..
Mymensingh District.									
Mymensingh	..	..	..	1	407 11 0	..	..	407 11 0	..
Muktagacha	..	..	..	1	192 0 0	..	..	192 0 0	2 0 0
Netrakona	..	..	..	1	240 0 0	..	..	240 0 0	..
Jamalpur	..	..	..	1	192 0 0	..	..	192 0 0	..
Sherpur	..	..	..	1	156 0 0	..	..	156 0 0	..
Kishorganj	..	..	..	1	160 14 0	..	..	160 14 0	..
Bajitpur	..	..	..	1	51 10 0	..	..	51 10 0	..
Tangail	..	..	..	1	190 11 0	..	..	190 11 0	..
Gauripur	..	..	..	1	55 10 0	..	..	55 10 0	..

Urban and rural areas.	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.	
	Contingencies.		Miscellaneous.	Total cost.	Provincial fund.	District fund.	Municipal fund.			Total.
	10	11									12	13	14	15	16	17	18
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Dinajpur District.										
Dinajpur .. ..	..	..	300 0 0	..	..	300 0 0	300 0 0	895	0 5 4
Jalpaiguri District.										
Jalpaiguri	24 0 0	..	300 0 0	..	..	300 0 0	300 0 0	666	0 7 2
Darjeeling District.										
Darjeeling	100 15 3	..	956 7 9	..	..	956 7 9	956 7 9	1,921	0 7 11
Kurseong	60 0 0	..	540 0 0	..	..	540 0 0	540 0 0	951	0 9 1
Rangpur District.										
Rangpur	125 0 0	..	677 0 0	..	..	677 0 0	677 0 0	1,957	0 5 6
Gaibandha .. ..	..	..	20 0 0	..	..	20 0 0	20 0 0	92	0 3 5
Bogra District.										
Bogra .. ..	..	..	157 0 0	..	..	157 0 0	157 0 0	994	0 2 6
Sherpur .. ..	..	..	122 0 0	..	..	122 0 0	122 0 0	89	1 5 11
Pabna District.										
Pabna .. ..	..	..	218 0 0	..	..	218 0 0	218 0 0	3,118	0 1 1
Sirajganj .. ..	..	..	358 0 0	..	..	358 0 0	358 0 0	2,009	0 2 10
Malda District.										
English Bazar ..	..	..	240 0 0	..	..	240 0 0	240 0 0	764	0 5 0
Malda	0 11 0	..	10 1 0	..	..	10 1 0	10 1 0	30	0 5 4
Nawabganj	1 6 0	..	229 6 0	..	..	229 6 0	229 6 0	508	0 7 2
Dacca District.										
Dacca	186 0 0	..	2,592 0 0	..	..	2,592 0 0	2,592 0 0	4,903	0 8 5
Narayanganj ..	28 2 3	..	604 2 3	..	..	604 2 3	604 2 3	1,887	0 5 1
Mymensingh District.										
Mymensingh ..	25 12 0	..	433 7 0	..	..	433 7 0	433 7 0	534	0 12 11
Muktagacha ..	3 5 0	..	197 5 0	..	..	197 5 0	197 5 0	232	0 13 7
Netrakona ..	..	..	240 0 0	..	..	240 0 0	240 0 0	369	0 10 4
Jamalpur ..	4 14 0	..	196 14 0	..	..	196 14 0	196 14 0	837	0 3 9
Sherpur ..	..	..	156 0 0	..	..	156 0 0	156 0 0	516	0 1 10
Kishorganj ..	12 6 0	..	173 4 0	..	..	173 4 0	173 4 0	662	0 4 2
Bajitpur ..	..	..	51 10 0	..	..	51 10 0	51 10 0	152	0 5 5
Tangail ..	..	..	190 11 0	..	..	190 11 0	190 11 0	327	0 9 3
Gauripur ..	6 13 0	..	62 7 0	..	..	62 7 0	62 7 0	198	0 5 0

Expenditure.									
Urban and rural areas.	Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.	Travelling allowance.	
	Number.	Pay.	Number.	Pay.	Number.	Pay.			
	2	3	4	5	6	7	8	9	
1		Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Faridpur District.									
Faridpur ..	..	..	1	360 0 0	..	..	360 0 0	30 0 0
Madaripur ..	..	..	1	252 0 0	..	..	252 0 0	..
Rajbari ..	..	..	1	248 6 0	..	..	248 6 0	..
Bakarganj District.									
Barisal ..	..	..	1	239 0 0	..	..	239 0 0	60 0 0
Jhalakati ..	..	..	1	180 0 0	..	..	180 0 0	..
Nalchiti ..	..	..	1	3 11 0	..	..	3 11 0	..
Pirojpur ..	..	..	1	168 0 0	..	..	168 0 0	..
Patuakhali ..	..	..	1	228 0 0	..	..	228 0 0	..
Bhola ..	..	..	1	336 0 0	..	..	336 0 0	..
Chittagong District.									
Chittagong ..	..	..	2	660 0 0	1	144 0 0	804 0 0	..
Cox's Bazar ..	..	..	1	102 0 0	..	..	102 0 0	..
Noakhali District.									
Noakhali ..	..	..	2	299 0 0	..	..	299 0 0	..
Tippera District.									
Comilla ..	..	..	1	300 0 0	..	..	300 0 0	60 0 0
Brahmanbaria ..	..	..	1	336 0 0	..	..	336 0 0	..
Chandpur ..	..	..	1	240 0 0	..	..	240 0 0	..
Total of the towns									
	23	31,001 0 0	214	83,104 9 3	32	6,059 0 0	1,20,164 9 3	3,423 15 6	
Provincial Vaccine Depot	2	(a) 8,225 0 0	(b) 8.	5,589 13 0	4	1,859 4 0	15,674 1 0	45 0 0	
Calcutta Corporation Vaccine Depot ..	1	4,190 0 0	4	1,880 0 0	..	..	6,070 0 0	..
Vaccination Bureau ..	3	10,557 13 0	..	..	..	..	10,557 13 0	1,175 6 0
Tea Gardens ..	..	..	..	..	..	..	..	..
Factories ..	..	..	..	..	..	..	..	..
Steamers ..	..	..	..	..	..	..	..	..
Railways ..	..	..	..	..	..	..	..	..
Jails ..	..	..	..	..	..	..	..	..
Dispensaries ..	..	..	..	..	..	..	..	..
Grand Total ..	109	94,800 1 10	1,935	2,72,476 14 3	37	8,038 4 0	3,75,315 4 1	36,890 7 9	

(a) Includes leave allowance of the retiring Superintendent.
(b) Including one Veterinary Surgeon.
(c) One Assistant Director of Public Health in charge of vaccination and vital statistics and two Special Inspectors of Vaccination.

Urban and rural areas	Expenditure.			Paid from—				Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.			
	Contingencies.		Miscellaneous.	Total cost.	Provincial fund.	District fund.	Municipal fund.			Total.		
	10	11	12	13	14	15	16			17	18	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
Faridpur District.												
Faridpur ..	21	11 0	411	11 0	..	..	411	11 0	411	11 0	606	0 10 10
Madaripur ..	..	..	252	0 0	..	..	252	0 0	252	0 0	777	0 5 2
Rajbari ..	..	..	248	6 0	..	..	248	6 0	248	6 0	331	0 11 8
Bakarganj District.												
Barisal ..	19	2 0	318	2 0	..	..	318	2 0	318	2 0	607	0 8 4
Jhalakati ..	10	0 0	190	0 0	..	..	190	0 0	190	0 0	109	1 11 10
Nalchiti ..	..	..	3	11 0	..	..	3	11 0	3	11 0	59	0 1 0
Pirojpur ..	3	14 6	171	14 6	..	..	171	14 6	171	14 6	831	0 3 3
Patuakhali ..	3	7 0	231	7 0	..	..	231	7 0	231	7 0	341	0 10 10
Bhola ..	..	..	336	0 0	..	..	336	0 0	336	0 0	274	1 3 6
Chittagong District.												
Chittagong ..	28	3 0	832	3 0	..	..	832	3 0	832	3 0	1,341	0 9 11
Cox's Bazar ..	..	..	102	0 0	..	..	102	0 0	102	0 0	125	0 13 1
Noakhali District.												
Noakhali ..	4	13 0	303	13 0	..	..	303	13 0	303	13 0	551	0 8 9
Tippera District.												
Comilla ..	20	0 0	380	0 0	..	..	380	0 0	380	0 0	972	0 6 0
Brahmanbaria ..	22	8 0	358	8 0	..	..	358	8 0	358	8 0	1,012	0 5 8
Chandpur ..	..	..	240	0 0	..	..	240	0 0	240	0 0	650	0 5 11
Total of the towns	4,981	8 0	1,28,570	0 9	53 2 0	..	1,28,516	14 9	1,28,570	0 9	178,118	0 11 6
Provincial Vaccine Depot	40,467	8 1	56,186	9 1	56,186 9 1	..	..	9 1	56,186	9 1	..	..
Calcutta Corporation Vaccine Depot ..	40,100	0 0	10,170	0 0	..	..	10,170	0 0	10,170	0 0	..	..
Vaccination Bureau ..	..	..	11,733	3 0	11,733 3 0	..	..	3 0	11,733	3 0	13,012	..
Tea Gardens ..	..	..	..	..	..	..	..	..	..	..	15,309	..
Factories ..	..	..	..	..	..	..	..	..	..	..	..	..
Steamers ..	..	..	..	..	..	..	..	..	..	..	..	..
Railways ..	..	..	..	..	..	..	..	..	..	..	..	..
Jails ..	..	..	..	..	..	..	..	..	..	..	..	..
Dispensaries ..	..	..	..	..	..	..	..	..	..	..	..	..
Grand Total	60,113	6 1	2,036	0 0	4,74,355 1 11	1,75,231 0 1	1,60,437 3 1	1,38,686 14 9	4,74,355 1 11	37,37,999	0 2 0	0 2 0

STATEMENT No. III

Showing the total number of persons vaccinated with the number of those persons who were successfully vaccinated during the last ten years.

Persons vaccinated.										
	1922-23.		1923-24.		1924-25.		1925-26.		1926-27.	
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
I. Government staff ..	11,299	8,522	8,623	6,790	10,303	8,309	12,366	10,090	9,984	7,656
II. District Boards ..	1,611,577	1,439,559	1,829,133	1,640,342	2,113,949	1,835,918	2,543,593	2,123,451	2,792,949	2,228,781
III. Municipalities ..	147,415	103,093	127,030	91,009	441,052	205,908	316,243	165,935	377,184	175,648
IV. Tea Gardens, Factories, Steamers, Railways, Jails and Dispensaries ..	54,849	25,554	82,913	48,169	95,758	46,248	99,158	51,968	96,858	46,115
V. Public Vaccinators ..	176,808	161,658	7,194	4,617	..	..	56,776	44,295	..	..
Total ..	2,001,948	1,738,386	2,054,893	1,790,927	2,661,062	2,096,383	3,028,136	2,395,739	3,276,975	2,458,200
Primary vaccinations ..	1,522,701	1,462,131	1,587,745	1,525,503	1,653,320	1,595,000	1,749,320	1,685,516	1,740,309	1,657,657
Percentage of the total ..	76.1	84.1	77.1	85.1	62.1	76.1	57.7	70.3	53.1	67.4
Re-vaccinations ..	479,247	276,255	467,148	265,424	1,007,742	501,383	1,278,816	710,223	1,536,666	800,543
Percentage of the total ..	23.9	15.9	22.9	14.9	37.9	23.9	42.3	29.7	46.9	32.6

Persons vaccinated.

	1927-28.		1928-29.		1929-30.		1930-31.		1931-32.	
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
I. Government staff ..	9,734	7,176	19,604	13,677	18,510	13,992	14,000	11,209	13,365	10,797
II. District Boards ..	3,589,713	2,701,154	4,842,438	3,508,399	4,974,545	3,618,352	4,617,578	3,300,019	5,058,535	3,493,638
III. Municipalities ..	262,585	130,869	296,973	143,218	410,690	172,926	523,392	230,667	364,299	178,118
IV. Tea Gardens, Factories, Steamers, Railways, Jails and Dispensaries ..	107,335	67,765	117,389	64,893	125,393	67,073	125,919	67,780	105,486	55,446
V. Public Vaccinators ..	..	..	..	..	..	..	..	..	..	..
Total ..	3,969,367	2,906,964	5,276,404	3,730,187	5,529,138	3,872,343	5,280,889	3,609,675	5,541,685	3,737,999
Primary vaccinations ..	1,925,601	1,814,715	2,048,775	1,896,877	2,303,797	2,149,944	2,246,250	2,077,031	2,450,114	2,228,149
Percentage of the total ..	48.5	62.2	38.8	50.8	41.6	55.5	42.5	57.5	44.2	59.3
Re-vaccinations ..	2,043,766	1,092,249	3,227,629	1,833,310	3,225,341	1,722,399	3,034,639	1,532,644	3,091,571	1,509,850
Percentage of the total ..	51.5	37.8	61.2	49.2	58.3	44.5	57.4	42.4	55.7	40.4

STATEMENT No. IV

Showing particulars of vaccination verified by the Inspecting Officers during the year 1931-32.

Serial No.	Districts.	Total number of persons vaccinated.			By District Health Officers.*			By Rural Inspecting Health Staff.			By Municipal Superintendents and Assistant Superintendents of Vaccination.			Percentage of		
		Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	2															
	Burdwan Division.															
1	Burdwan	65,747	71,664	137,411	11,482	6,043	17,525	45,248	35,968	81,216	444	827	1,271	18.6	9.9	14.2
2	Birbhum	41,845	52,789	94,634	347	213	560	1,848	391	2,239	31	188	219	.8	.4	.6
3	Bankura	46,531	41,701	88,232	1,584	2,785	4,369	1,934	1,582	3,516	296	380	676	3.5	7.3	5.2
4	Midnapur	147,337	242,243	389,580	579	221	800	35,916	48,231	84,147	788	1,124	1,912	.4	.09	.2
5	Hooghly ..	32,368	22,185	54,553	4,226	2,134	6,360	14,385	7,130	21,515	2,637	2,304	4,941	16.1	16.3	16.1
6	Howrah ..	33,483	43,833	77,316	2,455	699	3,154	11,921	2,860	14,781	520	475	995	8.8	3	6.2
	Presidency Division.															
7	24-Parganas	116,609	116,507	233,116	247	82	329	37,438	23,980	61,418	4,579	6,582	11,161	.2	.09	.2
8	Calcutta	29,416	147,046	176,462	..	..	..	..	..	..	20,657	61,840	82,497	..	..	..
9	Nadia ..	61,969	56,481	118,450	224	290	514	23,801	7,889	31,690	1,047	1,198	2,245	.4	.6	.5
10	Murshidabad	60,740	81,639	142,379	415	234	649	30,835	35,128	65,963	949	1,038	1,987	.7	.3	.5
11	Jessore ..	78,311	199,308	277,619	316	502	818	20,128	15,202	35,330	120	130	250	.4	.2	.3
12	Khulna ..	57,217	187,901	245,118	399	266	665	12,996	30,983	43,919	127	157	284	.7	.1	.3
	Rajshahi Division.															
13	Rajshahi	44,197	46,034	90,231	1,761	21	1,782	27,464	13,557	41,021	597	113	710	4.1	.04	2.1
14	Dinaipur	82,494	84,149	166,643	4,886	3,672	8,558	28,065	25,365	53,430	126	215	341	5.9	4.5	5.2
15	Jalpaiguri	31,119	62,349	93,468	1,567	2,351	3,918	1,662	2,055	3,717	250	360	610	5.1	3.9	4.3
16	Darjeeling	10,457	12,929	23,386	603	7	610	5,478	2,576	8,054	371	1,118	1,489	6.4	.1	3.9
17	Rangpur	138,005	190,375	328,380	12,560	9,230	21,790	30,296	42,174	72,470	328	700	1,028	9.1	4.9	6.7
18	Bogra ..	65,990	65,207	131,197	..	..	..	9,568	8,717	18,285	350	700	1,050	..	..	..
19	Pabna ..	65,131	57,081	122,212	210	118	328	16,679	8,631	25,310	1,584	707	2,291	.3	.2	.3
20	Malda ..	42,110	39,043	81,153	1,757	1,200	2,957	11,356	919	12,275	384	369	753	4.2	3.2	3.8
	Dacca Division.															
21	Dacca ..	180,521	162,619	343,140	400	100	500	56,900	27,864	84,764	1,742	2,041	3,783	.2	.07	.1
22	Mymensingh	371,705	419,016	790,721	750	511	1,261	68,407	57,162	125,569	1,285	1,599	2,884	.2	.1	.2
23	Faridpur	85,180	95,209	180,389	1,316	615	1,931	34,809	22,642	57,451	882	173	1,055	1.6	.7	1.1
24	Bakarganj	165,733	54,211	219,944	782	207	989	59,598	12,281	71,879	298	87	385	.5	.4	.5
	Chittagong Division.															
25	Chittagong	87,912	98,839	186,751	4,215	835	5,050	37,092	23,404	60,496	209	209	418	4.9	.9	2.8
26	Noakhali	101,040	128,746	229,786	2,876	914	3,790	50,910	16,280	67,190	185	256	441	2.9	.7	.2
27	Tipperra ..	180,858	261,795	442,653	648	467	1,115	22,097	20,878	42,975	1,027	341	1,368	.4	.2	.2
28	Chittagong Hill Tracts	8,453	4,912	13,365	52	9	61	3,973	1,934	5,907	..	..	..	.6	.2	.4
29	Railways, steamers, factories, dispensaries and tea gardens.	17,636	45,760	63,396	..	..	..	..	..	..	..	..	..	..	..	..
	Total	2,450,114	3,091,571	5,541,685	56,657	33,726	90,383	700,804	495,783	1,196,587	41,813	84,790	126,603	2.3	1.9	1.6

* Civil Surgeons of Darjeeling and the Chittagong Hill Tracts.

Serial No.		Districts.	Inspections to total number of vaccinations.						Percentage of cases found successful to total number inspected.						Percentage of success as reported by vaccinators.					
			By Rural Inspecting Health Staff.			By Municipal Superintendents and Assistant Superintendents of Vaccination.			By District Health Officers.			By Rural Inspecting Health Staff.				By Municipal Superintendent and Assistant Superintendent of Vaccination.				
			Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.	Primary.	Re-vacci-nation.	Total.		Primary.	Re-vacci-nation.	Total.		
1	2																			
Burdwan Division.																				
1		Burdwan ..	73.2	58.8	66.1	11.3	8.2	9.1	98.1	85.1	93.6	96.4	53.5	77.4	97.3	49.1	65.9	95.2	53.7	
2		Birbhum ..	4.4	7	2.4	20.1	55.4	44.4	90.8	51.6	75.9	97.8	40.9	87.9	100	7.9	21.0	90.8	50.7	
3		Bankura ..	4.2	4.2	4.2	31.2	10.8	15.2	99.1	75.8	84.3	99.1	61.6	82.2	96.6	28.1	58.1	99.6	62	
4		Midnapur ..	24.8	20.6	22.2	40.5	33.4	35.9	97.2	70.1	89.7	97.2	58.4	75	64.3	14.3	34.9	96.7	54.8	
5		Hooghly ..	54.7	54.4	54.6	43.4	28.3	34.7	97.3	83.03	92.5	94.9	73.4	87.8	92.4	39.8	67.9	96.5	67.7	
6		Howrah ..	42.8	12.3	28.9	9.2	2.7	4.3	98.04	36.3	84.4	97.6	55.8	89.5	95.4	15.8	57.4	99.3	44.1	
Presidency Division.																				
7		24-Parganas ..	36.9	27.7	32.6	30.2	25	26.9	96.8	46.3	84.2	92.2	55.2	77.7	98.5	37.5	61.6	93.1	53.1	
8		Calcutta ..	..	..	..	70.2	42	46.7	..	..	..	..	..	..	98.2	38.4	53.3	93.4	32
9		Nadia ..	40.5	16.4	29.6	32.4	15.4	20.4	93.8	39.3	63.03	87.9	65.8	82.4	99.9	38.8	67.3	92.7	58.8	
10		Murshidabad ..	53	45.4	48.7	36.6	35.8	36.2	99.5	98.3	99.07	91.9	76.7	83.8	95.9	24.8	58.8	92.1	46.4	
11		Jessore ..	25.8	7.7	12.8	37.4	23.8	28.8	97.8	49.4	68.08	91.4	79.2	86.1	95	38.5	65.6	96.2	49.2	
12		Khulna ..	23	16.7	18.2	15.8	15.8	15.8	99.2	70.3	87.7	97.04	39.9	56.8	96.1	6.4	46.5	99.7	40.3	
Rajshahi Division.																				
13		Rajshahi ..	63.9	31.7	47.9	54.1	9.6	31.1	99.9	52.4	99.3	97.9	68.9	88.3	99.7	42.5	90.6	98.1	61	
14		Dinaipur ..	34.2	30.9	32.6	23.5	20	21.2	76.8	67.1	72.6	90.7	70.7	81.2	97.6	28.9	54.2	91	66.8	
15		Jalpaiguri ..	5.4	3.4	4.1	62.5	36.2	43.7	88.5	55.6	68.8	83.7	39.4	59.2	100	48.6	69.7	87.2	48.7	
16		Darjeeling ..	58.2	41	51.3	35.6	17	19.6	99.2	42.8	98.5	94	56.2	81.9	93.8	16.01	35.4	93.7	33	
17		Rangpur ..	22.1	22.6	22.4	43.8	11.5	19.6	90.6	60.1	77.7	88.8	60.1	72.1	37.8	26.6	32.9	87.1	63.6	
18		Bogra ..	14.7	14	14.3	40.8	43.6	42.6	..	72.04	88.4	92.4	37.7	66.3	97.4	22.8	47.7	88.2	35.1	
19		Pabna ..	27.6	15.9	22	33.6	40	35.3	97.6	..	..	95.7	50.3	80.2	97.2	21.8	73.9	90.1	46.5
20		Malda ..	27.5	2.5	15.6	51.9	49.1	50.5	99.5	28.7	70.8	98.3	31.9	93.4	100	57.4	79.1	88.6	36.5	
Dacca Division.																				
21		Dacca ..	32.6	18.5	26.1	27.8	20.3	23.2	93.7	25	80	91.7	49.7	77.9	87.8	23.6	53.1	90.6	42.1	
22		Mynensingh ..	18.6	13.9	16.1	38.3	36.7	37.4	97.05	68.1	85.3	87.1	52.9	71.6	91.2	12.8	47.7	82.3	53.8	
23		Faridpur ..	41.6	24.3	32.5	56.7	13.6	37.4	83.1	43.7	70.6	95.3	55.6	79.7	99.2	35.8	88.8	93.6	37.4	
24		Bakarganj ..	36.3	24.6	33.6	16.8	3.8	9.5	85.3	65.2	81.1	96.8	72.9	92.7	94.9	26.4	79.5	92.1	59.3	
Chittagong Division.																				
25		Chittagong ..	42.8	24.6	33.3	16.7	10.4	12.8	95.6	30.9	84.9	93.5	42.9	73.9	96.2	31.1	63.6	91.7	28.8	
26		Noakhali ..	50.6	12.8	29.6	45.2	22.6	28.6	89.8	21.4	73.3	98.5	62.4	89.8	74.6	19.1	42.4	87	33	
27		Tippera ..	12.4	8.1	9.8	40.6	26.7	35.9	100	54.4	80.9	91.7	54.04	73.4	86.7	22.9	70.8	92.6	62.	
28		Chittagong Hill Tracts	47	39.4	44.2	..	..	..	92.3	44.4	85.2	99.02	48.2	82.4	..	..	..	99.8	48
29		Railways, steamers, factories, dispensaries and tea gardens.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total			28.6	16.03	21.6	1.7	2.7	2.3	93.2	64.1	82.3	93.5	57.7	78.7	95.3	36.2	55.7	90.9	43.9	

STATEMENT No. V.

Showing, side by side, the ratios per mille of population of deaths from small-pox and the number of successful vaccinations during the ten years ending 1931-32.

Districts.	1922-23.		1923-24.		1924-25.		1925-26.		1926-27.	
	Ratio of deaths from small-pox. 2	Number of successful vaccinations. 3	Ratio of deaths from small-pox. 4	Number of successful vaccinations. 5	Ratio of deaths from small-pox. 6	Number of successful vaccinations. 7	Ratio of deaths from small-pox. 8	Number of successful vaccinations. 9	Ratio of deaths from small-pox. 10	Number of successful vaccinations. 11
1										
Burdwan ..	·07	61,625	·09	70,268	·52	92,481	1·00	141,733	1·2	95,777
Birbhum ..	·07	20,915	·03	22,776	·11	45,598	1·00	41,778	1·6	62,195
Bankura ..	·05	49,218	·03	44,891	·18	46,361	·58	61,252	·36	53,415
Midnapur ..	·33	128,029	·09	112,358	·17	121,207	·59	143,575	1·2	145,873
Hooghly ..	·09	33,912	·06	30,468	·39	41,717	·95	41,794	·73	47,150
Howrah ..	·24	24,526	·06	36,726	·63	41,989	2·00	42,875	1·9	34,753
24-Parganas ..	·12	90,323	·11	99,751	·70	110,916	·86	127,161	1·3	105,185
Calcutta ..	·35	28,617	·06	20,251	2·51	106,242	1·76	56,042	2·2	77,359
Nadia ..	·05	58,850	·02	50,646	·05	61,166	·20	68,619	·32	60,442
Murshidabad ..	·16	43,769	·04	45,464	·03	46,712	·75	77,366	2·4	103,853
Jessore ..	·04	63,118	·01	53,295	·05	66,202	·20	66,033	·27	65,153
Khulna ..	·01	62,904	·009	50,529	·03	71,232	·05	63,337	·10	59,659
Rajshahl ..	·04	63,648	·07	52,187	·04	72,171	·04	73,334	·11	84,563
Dinajpur ..	·05	82,457	·008	75,006	·04	71,440	·22	89,749	·40	97,809
Jalpaiguri ..	1·36	34,671	·51	31,602	·28	31,051	·02	33,602	·17	31,535
Darjeeling ..	..	15,763	·01	16,320	·01	13,500	·07	23,828	·02	14,728
Rangpur ..	·09	71,797	·009	75,398	·04	54,223	·24	82,748	·52	104,140
Bogra ..	·005	22,621	·02	33,876	·41	31,746	·55	34,791	1·5	40,684
Pabna ..	·002	48,745	·01	28,831	·04	44,559	·48	54,870	·09	117,116
Malda ..	·09	45,506	·04	38,308	·18	57,821	·19	52,534	·57	61,239
Dacca ..	·29	97,044	·22	101,516	·17	127,386	·24	140,485	·21	147,745
Mymensingh ..	·22	203,223	·10	251,904	·14	271,481	·13	336,229	·32	320,817
Faridpur ..	·01	48,354	·007	41,167	·03	50,604	1·08	73,338	·16	86,759
Bakarganj ..	·006	58,875	·004	69,415	·02	93,922	·03	98,943	·05	104,265
Chittagong ..	·53	65,560	·47	81,266	·27	80,827	·31	88,071	·36	70,469
Noakhali ..	·09	49,711	·03	63,175	·06	69,357	·24	89,585	·27	83,883
Tippera ..	·04	147,535	·02	156,062	·02	135,725	·10	144,795	·23	138,946
Chittagong Hill Tracts ..	Not under registration. ..	8,522	Not under registration. ..	6,790	Not under registration. ..	8,309	Not under registration. ..	10,099	Not under registration. ..	7,656
Dispensary, Railway, Tea Garden and Factory Vaccinations.	..	8,548	..	39,681	..	30,438	..	37,127	..	32,032
Total ..	·16	1,738,386	·08	1,790,927	·22	2,096,383	·4	2,395,739	·68	2,458,200

Districts.	1927-28.		1928-29.		1929-30.		1930-31.		1931-32.	
	Ratio of deaths from small-pox. 12	Number of successful vaccinations. 13	Ratio of deaths from small-pox. 14	Number of successful vaccinations. 15	Ratio of deaths from small-pox. 16	Number of successful vaccinations. 17	Ratio of deaths from small-pox. 18	Number of successful vaccinations. 19	Ratio of deaths from small-pox. 20	Number of successful vaccinations. 21
1										
Burdwan ..	.72	77,742	.77	91,445	.19	89,992	.33	118,428	.17	96,755
Birbhum ..	1.20	59,195	.31	46,637	.10	39,285	.22	64,737	.19	65,037
Bankura ..	.23	54,272	.19	52,840	.06	58,323	.44	72,303	.18	70,749
Midnapur ..	1.70	271,278	.92	183,599	.05	238,723	.13	231,162	.06	276,558
Hooghly ..	.85	44,899	.71	50,507	.26	43,695	.64	61,047	.24	44,404
Howrah ..	1.51	35,924	.30	42,133	.29	45,472	1.04	52,985	.61	46,637
24-Parganas	.88	149,897	.35	164,434	.21	195,227	.21	190,695	.10	169,002
Calcutta ..	1.08	39,754	.42	38,572	1.02	74,021	1.37	95,001	.49	74,609
Nadia ..	.45	83,948	.69	91,636	.15	74,213	.09	85,792	.03	90,023
Murshidabad	2.35	112,182	1.87	223,872	.40	146,311	.17	92,658	.08	93,522
Jessore ..	.22	64,404	.11	122,989	.02	114,760	.10	211,429	.01	173,383
Khulna ..	.08	68,148	.03	107,011	.02	279,180	.03	146,848	.01	132,748
Rajshahi ..	.21	85,102	.55	120,738	.23	82,671	.007	66,059	.01	70,325
Dinajpur ..	.93	124,230	.86	130,579	.33	111,598	.13	124,998	.09	130,607
Jalpaiguri	.07	44,886	.06	42,343	.04	35,882	.02	48,037	.02	57,735
Darjeeling	.07	14,142	.30	27,058	.20	18,360	.04	14,115	.03	13,766
Rangpur ..	1.04	143,808	.83	195,466	.28	152,455	.25	228,465	.30	241,318
Bogra ..	2.58	41,588	1.18	42,740	.03	55,793	.04	56,949	.05	80,545
Pabna ..	2.42	140,844	.39	84,494	.09	75,538	.06	35,304	.01	83,239
Malda ..	1.55	109,382	2.37	353,700	.09	155,350	.05	31,835	.03	52,059
Dacca ..	.84	137,186	2.67	209,044	1.16	197,341	.61	150,853	.37	220,980
Mymensingh	.68	316,350	1.33	397,791	.33	540,226	.12	499,240	.21	530,305
Faridpur	.44	99,775	1.71	106,503	.95	129,572	.33	103,589	.06	115,554
Bakarganj	.07	135,215	.10	187,809	.07	229,642	.04	186,612	.01	184,616
Chittagong	1.01	90,520	2.13	123,482	.44	92,002	.21	83,227	.22	108,636
Noakhali	.49	110,503	.21	130,606	.07	131,366	.10	137,568	.04	130,181
Tippera ..	.41	191,211	1.16	299,215	.43	398,567	.20	314,254	.18	330,018
Chittagong Hill Tracts	Not under registration.	7,176	.22	13,677	.16	13,992	.02	11,209	..	10,797
Dispensary, Railway, Tea Garden and Factory Vaccinations.	..	53,403	..	49,269	..	52,786	..	44,276	..	32,891
Total	.85	2,906,964	.94	3,730,187	.32	3,872,343	.24	3,609,675	.15	3,737,999

STATEMENT No. VI.

Showing the degree of protection afforded to infants in the Presidency of Bengal during the year 1931-32.

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
RURAL AREAS.						
Burdwan Division.						
Burdwan ..	46,449	9,111	37,338	9,297	249.0	196.8
Birbhum ..	34,307	7,315	26,992	6,351	235.3	234.5
Bankura ..	28,043	5,290	22,753	5,838	256.6	267.4
Midnapur ..	74,595	12,636	61,959	24,409	393.9	382.0
Hooghly ..	22,213	4,256	17,957	2,915	162.3	149.9
Howrah ..	21,770	3,197	18,573	4,334	233.3	261.5
Presidency Division.						
24-Parganas ..	58,934	8,833	50,101	37,135	741.2	549.5
Nadia ..	47,953	9,838	38,115	12,618	331.0	443.7
Murshidabad ..	47,987	8,096	39,891	15,995	401.0	451.0
Jessore ..	36,420	7,361	29,059	8,888	305.9	118.7
Khulna ..	43,568	8,861	34,707	7,485	215.6	186.3
Rajshahi Division.						
Rajshahi ..	43,583	10,205	33,378	13,746	411.8	370.7
Dinajpur ..	50,629	8,479	42,150	5,632	133.6	266.0
Jalpaiguri ..	32,147	5,308	26,839	5,564	207.3	273.7
Darjeeling ..	10,587	1,408	9,179	2,934	319.6	407.4
Rangpur ..	70,338	18,423	51,915	4,399	84.7	76.3
Bogra ..	25,403	5,025	20,378	4,967	243.7	191.6
Pabna ..	32,701	6,337	26,364	4,921	186.6	277.4
Malda ..	28,715	4,952	23,763	19,563	823.2	368.4
Dacca Division.						
Dacca ..	80,624	17,046	63,578	11,543	181.5	69.04
Mymensingh ..	121,493	19,757	101,736	13,429	132.0	149.1
Faridpur ..	64,525	11,764	52,761	3,328	63.1	60.2
Bakarganj ..	65,174	9,253	55,921	1,844	32.9	31.2
Chittagong Division.						
Chittagong ..	49,912	7,438	42,474	9,830	231.4	413.3
Noakhali ..	60,748	7,102	53,646	10,153	189.2	208.5
Tippera ..	67,416	8,435	58,981	12,822	217.4	208.3
Chittagong Hill Tracts	5,919	1,029	4,890	328	67.1	112.1
Total of rural areas.	1,272,153	226,755	1,045,398	260,268	249.0	227.4
MUNICIPALITIES.						
Burdwan District.						
Burdwan ..	418	18	400	132	330.0	475.5
Kalna ..	129	41	88	76	863.6	1,057.9
Katwa ..	81	8	73	163	2,232.7	1,900.0
Dainhat ..	40	11	29	190	6,551.9	2,539.9
Raniganj ..	316	54	262	254	969.4	524.0
Asansol ..	524	62	462	344	744.6	410.1

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Birbhum District.						
Suri	100	27	73	7	95.9	77.7
Bankura District.						
Bankura	388	51	337	216	640.9	828.0
Vishnupur ..	345	55	290	9	31.0	635.1
Sonamukhi ..	299	69	230	6	26.1	793.6
Midnapur District.						
Midnapur	620	22	598	88	147.1	193.3
Ghatal	309	43	266	83	312.0	313.6
Kharar	74	8	66	..	..	..
Chandrakona ..	140	30	110	18	163.6	43.9
Ramjibanpur ..	128	25	103	12	116.5	485.2
Kharpai	67	15	52	..	..	..
Tamluk	165	18	147	30	204.1	254.2
Hooghly District.						
Hooghly-Chinsura ..	968	152	816	477	584.5	2,263.4
Bansbaria	91	21	70	10	142.8	60.9
Arambagh	114	26	88	31	352.2	260.2
Serampur	769	89	680	298	438.2	1,074.6
Rishra-Konnagar ..	384	47	337	59	175.1	387.4
Uttarpara	177	8	169	23	136.1	84.7
Kotrung	156	22	134	32	238.8	361.5
Baidyabati	486	58	428	133	310.7	552.5
Bhadreshwar	374	63	311	84	270.1	222.8
Champdani	417	62	355	166	467.5	74.07
Howrah District.						
Howrah	5,342	1,314	4,028	2,680	665.4	923.2
Bally	523	48	475	39	82.1	142.1
24-Parganas District.						
South Suburban ..	943	211	732	703	960.4	840.9
Tollyganj	514	34	480	314	654.1	628.0
Budge Budge	285	4	281	240	854.0	675.5
Baranagar	1,001	168	833	281	337.3	321.2
Kamarhati	469	38	431	134	310.9	337.5
Rajpur	252	15	237	26	109.7	152.2
Baruipur	87	9	78	64	820.5	554.3
Jaynagar	91	19	72	13	180.5	187.5
North Dum-Dum ..	113	20	93	16	172.0	172.0
Dum-Dum	21	5	16	10	625.0	869.6
South Dum-Dum ..	383	46	337	132	391.6	317.0
Khardah	104	14	90	5	55.5	607.2
Barrackpur	192	22	170	143	841.1	381.5
Panihati	356	45	311	197	633.4	773.9
North Barrackpur ..	424	66	358	215	600.5	123.9
Titagarh	726	107	619	193	319.8	332.3
Garulia	164	15	149	81	543.6	581.4
Naihati	350	32	318	138	433.9	793.0
Halisahar	136	22	114	8	70.1	..
Kanchrapara	253	23	230	112	486.9	..
Bhatpara	1,357	157	1,200	621	517.5	219.0
Barasat	154	13	141	23	163.1	48.7
Gobardanga	40	2	38	33	868.4	51.2
Basirhat	605	104	501	342	682.6	521.8
Baduria	283	52	231	261	1,129.8	1,020.4
Taki	162	33	129	70	542.6	479.0
Calcutta	26,011	6,352	19,659	14,554	740.3	1,152.5

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Nadia District.						
Krishnagar ..	556	32	524	217	414.1	387.7
Nabadwip ..	385	55	330	165	500.0	244.7
Ranaghat ..	179	20	159	329	2,069.1	1,070.6
Birnagar ..	56	11	45	53	1,177.8	1,587.0
Santipur ..	570	94	476	22	46.2	129.2
Chakdaha ..	75	13	62	55	887.0	538.4
Kushtia ..	103	12	91	14	153.8	85.1
Kumarkhali ..	69	15	54	69	1,277.8	1,072.7
Meherpur ..	90	11	79	41	518.9	247.6
Murshidabad District.						
Berhampur ..	477	95	382	78	204.2	350.0
Murshidabad ..	250	24	226	34	150.4	227.5
Jiaganj-Azimganj ..	191	13	178	196	1,101.2	1,293.7
Kandi ..	233	29	204	171	838.2	73.0
Jangipur ..	316	12	304	37	121.7	202.0
Dhulian ..	258	24	234	99	423.0	782.7
Jessore District.						
Jessore ..	99	2	97	24	247.4	189.0
Kotchandpur ..	51	10	41	16	390.2	218.1
Maheshpur ..	42	6	36	..	..	90.9
Khulna District.						
Khulna ..	147	21	126	21	166.7	423.3
Satkhira ..	167	44	123	84	682.9	430.4
Debhata ..	89	9	80	44	550.0	547.6
Rajshahi District.						
Rajshahi ..	510	62	448	358	799.0	407.4
Nator ..	131	29	102	..	..	37.03
Dinaipur District.						
Dinaipur ..	218	36	182	153	840.6	1,304.9
Jalpaiguri District.						
Jalpaiguri ..	316	18	298	221	741.5	1,151.5
Darjeeling District.						
Darjeeling ..	806	115	691	432	625.1	622.3
Kurseong ..	271	36	235	292	1,242.5	1,000.0
Rangpur District.						
Rangpur ..	261	22	239	66	276.1	286.4
Gaibandha ..	206	14	192	3	15.6	..
Bogra District.						
Bogra ..	79	15	64	42	656.2	400.0
Sherpur ..	64	3	61	3	49.1	225.8
Pabna District.						
Pabna ..	134	9	125	854	6,832.0	2,483.3
Sirajganj ..	449	58	391	439	1,122.8	863.4

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Malda District.						
English Bazar ..	363	30	333	237	711·6	1,101·9
Malda ..	51	9	42	9	214·3	..
Nawabganj ..	475	66	409	44	107·6	101·9
Dacca District.						
Dacca ..	4,493	962	3,531	1,892	535·8	740·2
Narayanganj ..	1,104	245	859	289	336·4	274·1
Mymensingh District.						
Mymensingh ..	586	90	496	26	52·4	56·2
Muktagacha ..	131	11	120	4	33·3	109·2
Netrakona ..	274	36	238	65	273·1	301·9
Jamalpur ..	465	73	392	96	244·9	163·2
Sherpur ..	543	63	480	33	68·7	83·5
Kishorganj ..	269	21	248	103	415·3	239·3
Bajitpur ..	114	11	103	..	..	27·5
Tangail ..	226	42	184	14	76·1	155·8
Gauripur ..	65	1	64	5	78·1	..
Faridpur District.						
Faridpur ..	229	38	191	121	63·3	685·2
Madaripur ..	327	24	303	15	49·5	111·1
Rajbari ..	138	18	120	50	416·7	333·3
Bakarganj District.						
Barisal ..	480	122	358	10	27·9	50·9
Jhalakati ..	122	13	109	2	18·3	69·7
Nalchiti ..	34	5	29	..	..	..
Pirojpur ..	275	42	233	370	1,588·0	1,141·4
Patuakhali ..	102	8	94	..	..	11·1
Bhola ..	136	7	129	..	..	..
Chittagong District.						
Chittagong ..	954	150	804	89	110·7	150·2
Cox's Bazar ..	45	5	40	28	700·0	447·7
Noakhali District.						
Noakhali ..	254	12	242	19	78·5	57·3
Tippera District.						
Comilla ..	232	24	208	114	548·0	436·1
Brahmanbaria ..	793	85	708	58	81·9	116·9
Chandpur ..	142	14	128	76	593·7	430·3
Total of the Municipalities ..	70,690	13,291	57,399	32,995	574·9	741·2
Grand Total of the Presidency ..	1,342,843	240,946	1,102,797	293,263	265·9	253·1

GOVERNMENT OF BENGAL.

Local Self-Government Department.

Public Health.

CALCUTTA, THE 23RD APRIL 1934.

RESOLUTION—No. 948 P.H.

Minister-in-charge: The Hon'ble Sir Bijoy Prasad Singh Roy, Kt.

Read—

The Report of the Director of Public Health, the Sanitary Board and the Chief Engineer, Public Health Department, for the year 1931.

Vital Statistics.—In the Public Health Report under review the census figures for 1931 have been used as the basis for calculating the relation of the vital statistics to the total population of Bengal, and the ratios recorded may, therefore, be regarded as representing a more accurate estimate of the incidence of births and deaths per thousand of population than was possible during the previous eight or nine years. But, while the census figures ensure the accuracy of the denominator, the numerator must still contain a considerable margin of error owing to the defective character of the annual returns, to which attention was again drawn in the last resolution. In addition, in any comparison which is made between the percentage in the year under review and in those immediately preceding it, the different degrees of accuracy in the two denominators must also be borne in mind.

In the year 1931 the total population of Bengal, excluding Indian States and the Chittagong Hill Tracts, was 49,901,080, which shows an increase of 3,378,787 over that recorded in the previous census. The increase was shared by all districts except Jessore and Rajshahi, in which, owing mainly to malaria, there was a decrease of 3·0 per cent. and 4·6 per cent., respectively. The greatest increase occurred in the south-eastern corner of Bengal, represented by Noakhali (15·9 per cent.), Tippera (13·3 per cent.), Bakarganj (12·9 per cent.) and Chittagong (11·5 per cent.) and in the districts of Darjeeling (13 per cent.) and Murshidabad (12 per cent.).

The number of births recorded during 1931 was 1,388,219 against 1,237,931 in 1930 and the number of deaths 1,113,312 against 1,044,256. The births, therefore, exceeded the deaths by 274,907 as against an excess of 193,675 in 1930. It was only in Calcutta and the districts of Jessore and Pabna that the number of deaths exceeded the births; the other four districts which had shown a similar result in 1930, viz., Nadia, Malda, Rajshahi and Dinajpur, reported an excess of births over deaths in 1931. The birth rate increased from 26·6 per mille in 1930 to 27·8 per mille in 1931, while the death rate remained almost stationary.

Infant mortality.—2,41,552 infants under the age of one year died during 1931, an increase of 9,680 over the previous year, but this represents an actual decrease in the rate per thousand births from 187·3 to 174·0, the lowest recorded for many years. The improvement was shared by towns and rural areas alike, as the ratio in the former fell from 202·4 in 1930 to 187 in 1931 and that in rural areas from 186·5 to 173·3.

The progress made in maternity and child welfare work is not very encouraging. The number of dai training classes, which are conducted by district boards at the entire cost of Government, fell from 98 in 1930 to 94 in 1931 and the number of dais attending the classes decreased from 1,113 to 1,074. The district board of Rajshahi and the municipalities of Raniganj, Arambagh, Naihati, Bogra and Tangail failed to open the classes for which allotments were sanctioned.

Cholera.—Bengal was one of the three provinces which showed an increase over the previous year in the rate of deaths from cholera, and this rate was higher than in any other province.

The actual number of such deaths was 79,073 against 54,963 in the previous year or an increase of 33·3 per cent. It was, however, 11·1 per cent. less than the average of the previous quinquennium. Cholera alone accounted for 7·1 per cent. of the total deaths in the province. The provincial death rate from cholera was 1·6 per mille of population and this rate was exceeded in seven districts, the most notable of which were Pabna with 4·8 per mille and Dacca and Faridpur with 2·5 each. Eleven districts were able to report a decrease in the death rate from cholera as compared with 1930. As in previous years the preventive measures adopted took the form of inoculation and disinfection of sources of water supply, and efforts were made by means of lantern lectures and the distribution of leaflets and posters to impress upon the people the necessity of taking timely precautions.

The Public Health Department also assisted the local authorities whenever possible by lending the services of their officers to help to cope with local epidemics.

Small-pox.—There were 9,207 deaths from small-pox in 1931 as compared with 11,268 in 1930, showing a reduction of 66·7 per cent. The death rate in towns was ·59 per mille against 1·01 in 1930 and in rural areas ·15 per mille against ·19. Since 1928 when the epidemic which began in 1924 reached its climax, the incidence of small-pox has steadily declined and in 1931, it was responsible for only 0·8 per cent. of the total deaths in the province. The number of vaccinations performed during the year under review increased by 440,634 or 9·5 per cent. in the rural areas but decreased by 159,132 or 30·3 per cent. in urban areas as compared with those in the preceding year.

Malaria and Kala-azar.—There was a slight increase in the deaths from malaria as compared with those in the previous year, namely, 349,111 in 1931 against 336,879 in 1930. This represents a death rate from this cause of 7 per mille of population. The rate was heaviest in Malda, where it reached 22·8 per thousand, Nadia (20·5), Rajshahi (20·4), Jessore (18·4), Murshidabad (14·6), Pabna (12·1), Dinajpur (11·4) and Birbhum (11·0). The reduction in the fever indices in four of those districts, including Malda, suggests that the incidence of malaria may be decreasing in those areas but it is disquieting to read

that compared with the previous year the indices show an increase in 21 districts and the death rate an increase in 14 districts. Ten thousand one hundred and ninety-nine deaths, representing 20 per mille were ascribed to kala-azar in 1931 against 10,914 in 1930. The steady decrease in the number of cases treated, which was commented upon in the last resolution, was maintained in 1931, when there were 8,866 fewer cases than in 1930; although the reduction in the number of special treatment centres must be regarded as at any rate partly responsible for this decrease, it may be hoped without undue optimism that the figures reflect a real reduction in the prevalence of the disease.

Educational propaganda and publicity.—The continued popularity of the Publicity Branch of the Department, as demonstrated by the increasing demand for its staff and equipment is a gratifying feature of the year's report and arouses a reasonable expectation that the barrier of ignorance and indifference, presented by the mass of the population, which is one of the main obstacles to the improvement of public health conditions, will soon be broken down.

Public Health Engineering.—The Asansol Water Supply Scheme was completed during the year at a cost of Rs. 4,50,000. The system, now adopted for the first time, provides for the supply of water into small storage tanks, instead of direct into taps, so that the householder receives only the amount of water to which his rates entitle him; this naturally results in a more economical use of filtered water.

The total capital expenditure on water works and sewerage works during the year was Rs. 12,58,885 against Rs. 8,76,542 in the previous year. This included Rs. 4 $\frac{3}{4}$ lakhs spent on the Bhatpara Sewerage Scheme which is still in progress.

Sketch projects for schemes of water supply, surface drainage and sewerage were prepared, the aggregate of the estimates amounting to Rs. 32 lakhs. By means of these sketch projects municipalities were able to consider their position and in many cases to make an advance towards the execution of the schemes. Unfortunately, however, progress is slow, owing to the general financial stringency in the province.

Detailed and miscellaneous schemes were also prepared involving estimates which amount to more than Rs. 11 lakhs.

Personal.—The last resolution made a reference to the invaluable services of Dr. Bentley, who finally retired from the post of Director of Public Health in June 1931. Dr. Khambata, who succeeded him, took over charge from 23rd February 1931 and was thus Director for the greater part of the year.

Mr. Griffin remained in charge of the office of Chief Engineer, Public Health Department.

The Minister desires to take this opportunity of once again expressing his appreciation of the services rendered by these two officers.

By order of the Government of Bengal
(Ministry of Public Health),

H. R. WILKINSON,
Secretary to the Government of Bengal.

Nos. 949-58P.H.

Copy of the resolution [with copies of the reports] forwarded to (1) all Commissioners of Divisions for information and communication to all District Officers and all Chairmen of District Boards in their respective Divisions; (2) the Surgeon-General with the Government of Bengal, and the Inspector-General of Police Bengal, for information; (3) Director of Public Health, Bengal, the Chief Engineer, Public Health Department, Bengal, and the Secretary to the Sanitary Board, Bengal, for information.

[] for (1) and (2) only.

By order of the Government of Bengal,
(Ministry of Public Health),

A. Z. KHAN,

Assistant Secretary to the Government of Bengal.

Calcutta, the 23rd April, 1934.

